

San Jagannathan

Access DB# 206722

SPE, 1714

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Callie Shusho Examiner #: 000000 Date: 11/6/06  
Art Unit: 1714 Phone Number: 30272-1123 Serial Number: 101647766  
Mail Box and Bldg/Room Location: Room 10015 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Polyamine Derivatives, a Process to make them, and their use  
Inventors (please provide full names): Johannes A. Pardon, Richard H. Brinkhuis  
Rudolf A. Venderbusch

Earliest Priority Filing Date: 10/29/02

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

~~PLEASE~~ Please find the polyamine of attached  
Claim 9.

SCIENTIFIC REFERENCE BH  
Sci & Tech Inf. Ctr  
NOV 06 REC'D  
Pat. & T.M. Office

Thank You

## STAFF USE ONLY

Searcher: K. Fuller  
Searcher Phone #: \_\_\_\_\_  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: \_\_\_\_\_  
Date Completed: 11/7/06  
Searcher Prep & Review Time: 40  
Clerical Prep Time: \_\_\_\_\_  
Online Time: 60

## Type of Search

NA Sequence (#) \_\_\_\_\_  
AA Sequence (#) \_\_\_\_\_  
Structure (#) 4  
Bibliographic \_\_\_\_\_  
Litigation \_\_\_\_\_  
Fulltext \_\_\_\_\_  
Patent Family \_\_\_\_\_  
Other \_\_\_\_\_

## Vendors and cost where applicable

STN ✓  
Dialog \_\_\_\_\_  
Questel/Orbit \_\_\_\_\_  
Dr.Link \_\_\_\_\_  
Lexis/Nexis \_\_\_\_\_  
Sequence Systems \_\_\_\_\_  
WWW/Internet \_\_\_\_\_  
Other (specify) \_\_\_\_\_

=> FILE REG

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FILE COVERS 1907 - 7 Nov 2006 VOL 145 ISS 20  
FILE LAST UPDATED: 6 Nov 2006 (20061106/ED)

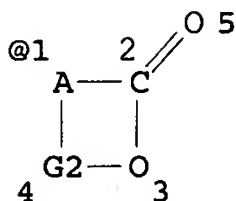
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This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE

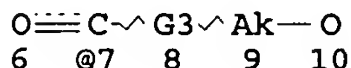
L4 STR

G4 11



Structure 1

covering  
lactone,  
cyclic carbonate  
or  
hydrolyzable



REP G2=(1-4) A

REP G3=(0-1) O

VAR G4=1/7

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L5 SCR 2043

L7 STR 2

- polyamine

N-Ak-NH-Ak-N

4 5 6 7 8

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L9	1712	SEA	FILE=REGISTRY	SSS	FUL	L4	AND	L7	AND	L5
L11	843	SEA	FILE=REGISTRY	ABB=ON		L9	AND	PUA/PCT		
L12	740	SEA	FILE=REGISTRY	ABB=ON		L9	AND	PUR/PCT		
L13	340	SEA	FILE=HCAPLUS	ABB=ON		L11				
L14	290	SEA	FILE=HCAPLUS	ABB=ON		L12				
L15	240	SEA	FILE=HCAPLUS	ABB=ON		L13 (L)	PREP/RL			
L16	212	SEA	FILE=HCAPLUS	ABB=ON		L14 (L)	PREP/RL			
L17	253	SEA	FILE=HCAPLUS	ABB=ON		L15 OR L16				
L21	6	SEA	FILE=HCAPLUS	ABB=ON		L15 (L)	POLYAMINE?			
L22	4	SEA	FILE=HCAPLUS	ABB=ON		L16 (L)	POLYAMINE?			
L23	29	SEA	FILE=HCAPLUS	ABB=ON		L17 AND	POLYAMINE?/IT			
L24	29	SEA	FILE=HCAPLUS	ABB=ON		(L21 OR L22 OR L23)				
L26	765	SEA	FILE=HCAPLUS	ABB=ON		L9				
L27	501	SEA	FILE=HCAPLUS	ABB=ON		L26 (L)	PREP/RL			
L28	90	SEA	FILE=HCAPLUS	ABB=ON		L27 AND	POLYAMINE?/IT			
L29	20	SEA	FILE=HCAPLUS	ABB=ON		L28 AND	?ISOCYANAT?			
L30	31	SEA	FILE=HCAPLUS	ABB=ON		L24 OR L29				

1, 712 polymers with structure  
queries 1 and 2

31 CA references -  
preparation  
and polyamines  
and isocyanat. 2

=&gt; D L30 BIB ABS IND HITSTR 1-31

L30 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2006:1070157 HCAPLUS  
 TI Film-forming compositions derived from acyclic carbonates and polyamines, preparation of films, and coated articles  
 IN Eswarakrishnan, Venkatachalam; Mccollum, Gregory J.; Scott, Matthew; Webster, Geoffrey R.; Orzechowski, Judith A.; Dufford, Kevin J.; Fenn, David Robert; Kaylo, Alan J.; Moriarity, Thomas C.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 11pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006229419	A1	20061012	US 2005-101803	20050408
	WO 2006110515	A1	20061019	WO 2006-US12983	20060405
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI US 2005-101803 A 20050408

AB The title composition includes a reaction product of (a) a polyamine containing a

primary amino group and a secondary amino group, and (b) an acyclic carbonate. The composition also includes a secondary reactant comprising a polyepoxide polymer such as an epoxy-functional acrylic polymer comprising graft copolymers of acrylic polymers and polyepoxides, where the polyepoxides used to prepare the graft copolymer are prepared by reacting ethyltriphenylphosphonium iodide with a polyglycidyl ether of a polyhydric alc. or phenol. An example composition contained diethylenetriamine 206.0, di-Me carbonate 396.0, EPON 880 376.0, and MIBK 148.5 g.

INCL 525529000; 525461000; 428412000

CC 42-3 (Coatings, Inks, and Related Products)

ST polyurea crosslinker epoxy resin electrodeposition coating metal

IT Epoxy resins

RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(acrylates; crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT Epoxy resins

RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(acrylic, graft; crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT Crosslinking agents

Electrodeposits

(crosslinker derived from acyclic carbonates and **polyamines**)



for epoxy electrodeposits)

IT Epoxy resins  
Polyureas  
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT Acrylic polymers  
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(epoxy, graft; crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT Coating materials  
(solvent-resistant; crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT 851881-06-6P, Diethylenetriamine-dimethyl carbonate copolymer  
912353-20-9P 912353-22-1P 912353-24-3P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
(crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

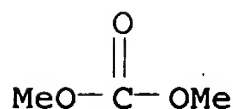
IT 25068-38-6, Epon 828 26588-79-4, Joncryl 500 32492-61-8, Macol 98B  
912353-26-5 912353-28-7  
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

IT 912353-20-9P 912353-24-3P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
(crosslinker derived from acyclic carbonates and **polyamines** for epoxy electrodeposits)

RN 912353-20-9 HCAPLUS  
CN INDEX NAME NOT YET ASSIGNED

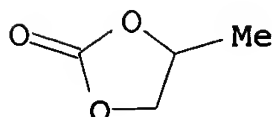
CM 1

CRN 616-38-6  
CMF C3 H6 O3



CM 2

CRN 108-32-7  
CMF C4 H6 O3



CM 3

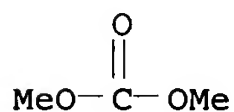
CRN 56-18-8  
CMF C6 H17 N3



RN 912353-24-3 HCAPLUS  
CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 616-38-6  
CMF C3 H6 O3



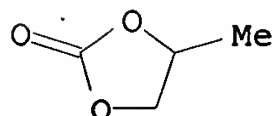
CM 2

CRN 143-23-7  
CMF C12 H29 N3



CM 3

CRN 108-32-7  
CMF C4 H6 O3



L30 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2006:599885 HCAPLUS  
DN 145:64663  
TI Resins for paper coatings and the water-resistant coating compositions  
with ink-receipting ability therefrom  
IN Hamaguchi, Toshishige  
PA Taoka Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

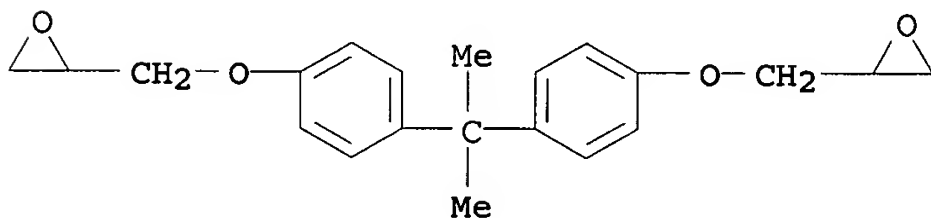
PATENT NO. KIND DATE APPLICATION NO. DATE

-----  
 PI JP 2006161243 A2 20060622 JP 2004-358384 20041210  
 PRAI JP 2004-358384 20041210  
 AB Title resins are prepared from (a) polyvalent carboxylic acid (A) and  
 ≥2 glycidyl ether-containing glycidyl compds. (B) reaction products,  
 (b) aliphatic amines, (c) ureas, and (d) alkylation agents at X3 - |X1 - X2|  
 - X4 - X5 > 0 (X1 = COOH number of A; X2 = glycidyl ether number of B; X3 =  
 active H number of primary and secondary amines; X4 = mol. number of ureas ; X5  
 = functional group of alkylation agents). A resin was prepared from  
 bisphenol A diglycidyl ether/tetrahydrophthalic anhydride product,  
 ε-caprolactam (I), triethylene tetramine, epichlorohydrin, and  
 urea (II) at X1, X2, X3, X4, and X5 = 33.3, 8.3, 100, 10.9 (including I  
 and II), and 10.0, resp. and was used to form a coating with high water  
 resistance and ink-receipting ability.  
 CC 42-13 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 43  
 ST ink receipting ability paper coating resin component ratio control; water  
 resistance paper coating resin component ratio control  
 IT Polyesters, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy-polyamine-; resins from sp. components with functional  
 group control for paper coatings with water resistance and ink  
 receipting ability)  
 IT **Polyamines**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy-polyester-; resins from sp. components with functional group  
 control for paper coatings with water resistance and ink receipting  
 ability)  
 IT Paper  
 (ink-receipting coatings for; resins from sp. components with  
 functional group control for paper coatings with water resistance and  
 ink receipting ability)  
 IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyester-; resins from sp. components with  
 functional group control for paper coatings with water resistance and  
 ink receipting ability)  
 IT Coating materials  
 (water-resistant; resins from sp. components with functional group  
 control for paper coatings with water resistance and ink receipting  
 ability)  
 IT **890928-66-2P**, Bisphenol A diglycidyl ether-epichlorohydrin-  
 tetrahydrophthalic anhydride-triethylenetetramine-urea-6-caprolactam  
 copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (resins from sp. components with functional group control for paper  
 coatings with water resistance and ink receipting ability)  
 IT **890928-66-2P**, Bisphenol A diglycidyl ether-epichlorohydrin-  
 tetrahydrophthalic anhydride-triethylenetetramine-urea-6-caprolactam  
 copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (resins from sp. components with functional group control for paper  
 coatings with water resistance and ink receipting ability)

RN 890928-66-2 HCAPLUS  
 CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  
 (chloromethyl)oxirane, hexahydro-2H-azepin-2-one, 2,2'-[(1-  
 methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] and  
 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

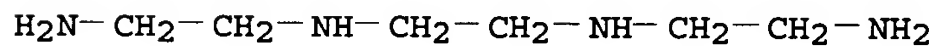
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CRN 1675-54-3  
 CMF C21 H24 O4



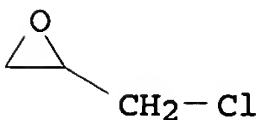
CM 2

CRN 112-24-3  
 CMF C6 H18 N4



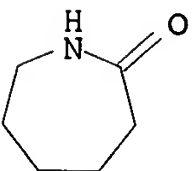
CM 3

CRN 106-89-8  
 CMF C3 H5 Cl O



CM 4

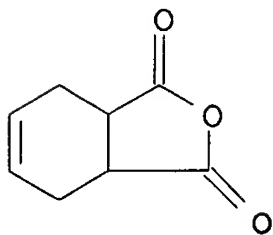
CRN 105-60-2  
 CMF C6 H11 N O



CM 5

CRN 85-43-8

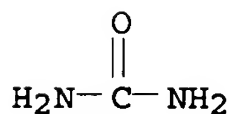
CMF C8 H8 O3



CM 6

CRN 57-13-6

CMF C H4 N2 O



L30 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2006:502790 HCAPLUS  
DN 145:169036  
TI Waterborne polyurethanes: spectroscopy and stability of emulsions  
AU Zhang, Subiao; Lv, Hongtao; Zhang, Han; Wang, Bing; Xu, Yingmei  
CS Department of Chemical Engineering, College of Life Science, Dalian  
Nationalities University, Dalian, 116600, Peop. Rep. China  
SO Journal of Applied Polymer Science (2006), 101(1), 597-602  
CODEN: JAPNAB; ISSN: 0021-8995  
PB John Wiley & Sons, Inc.  
DT Journal  
LA English  
AB We prepared waterborne polyurethanes based on isophorone  
**diisocyanate**, dimethylolpropionic acid, polyhexane neopentyl  
adipate glycol, or polyethylenebutylene adipate glycol through  
self-emulsion (a prepolymer process). Their IR and NMR spectroscopic  
properties were investigated, and the peaks of these spectra were  
assigned. The stability of the emulsions was studied on the basis of the  
shelf life and particle size distribution of emulsions. The effects of  
solvents, hard-segment content, carboxylic group content, extenders, and  
feeding methods on the stability of the emulsions were determined to show that  
N-methylpyrrolidone was a good solvent for retaining the stability of  
emulsions; particle sizes decreased with increasing COOH content and  
decreasing hard-segment content, whereas the extenders and feeding methods  
studied had little effect on the stability of the emulsions. The causes  
of the stability of the emulsions are discussed according to the anal. of  
the mol. and particulate structures.  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 37  
ST emulsion stability polyester polyurethane ionomer  
IT Polyurethanes, properties  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyamine-polyester-polyurea-, ionomers; spectroscopic  
characterization and emulsion stability of polyester-based polyurethane  
ionomers)  
IT Ionomers

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyamine-polyester-polyurea-polyurethanes; spectroscopic  
 characterization and emulsion stability of polyester-based polyurethane  
 ionomers)

IT Polyureas  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyamine-polyester-polyurethane-, ionomers; spectroscopic  
 characterization and emulsion stability of polyester-based polyurethane  
 ionomers)

IT Polyesters, properties  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyamine-polyurea-polyurethane-, ionomers; spectroscopic  
 characterization and emulsion stability of polyester-based polyurethane  
 ionomers)

IT Polyamines  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyester-polyurea-polyurethane-, ionomers; spectroscopic  
 characterization and emulsion stability of polyester-based polyurethane  
 ionomers)

IT Particle size  
 (spectroscopic characterization and emulsion stability of  
 polyester-based polyurethane ionomers)

IT Coating materials  
 (water-thinned; spectroscopic characterization and emulsion stability  
 of polyester-based polyurethane ionomers)

IT 872-50-4, N-Methylpyrrolidone, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (spectroscopic characterization and emulsion stability of  
 polyester-based polyurethane ionomers)

IT 189750-60-5P 899900-46-0P 899900-48-2P 899900-50-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (spectroscopic characterization and emulsion stability of  
 polyester-based polyurethane ionomers)

IT 899900-50-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (spectroscopic characterization and emulsion stability of  
 polyester-based polyurethane ionomers)

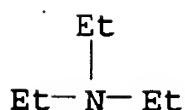
RN 899900-50-6 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-  
 2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane, block, compd. with N,N-diethylethanamine (9CI) (CA  
 INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N

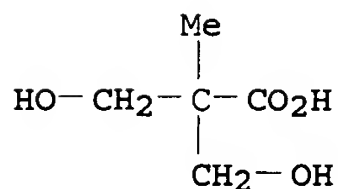


CM 2

CRN 899900-49-3  
 CMF (C12 H18 N2 O2 . C6 H14 O2 . C6 H10 O4 . C5 H12 O2 . C5 H10 O4 . C4  
 H13 N3)x  
 CCI PMS

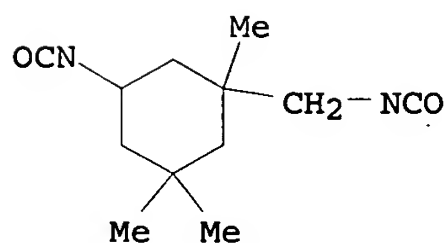
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CRN 4767-03-7  
 CMF C5 H10 O4



CM 4

CRN 4098-71-9  
 CMF C12 H18 N2 O2



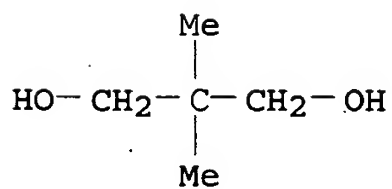
CM 5

CRN 629-11-8  
 CMF C6 H14 O2



CM 6

CRN 126-30-7  
 CMF C5 H12 O2



CM 7

CRN 124-04-9  
CMF C6 H10 O4

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

CM 8

CRN 111-40-0  
CMF C4 H13 N3

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:386683 HCAPLUS

DN 144:434559

TI Storage-stable pigment dispersion pastes, and electrodeposition coatings containing them, and their coated members

IN Kato, Kiyoshi; Shimoda, Masaharu; Yoshikawa, Naoyuki; Kamikado, Koji

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006111699	A2	20060427	JP 2004-299230	20041013
PRAI	JP 2004-299230		20041013		

AB The pastes comprise (A) matrix resins, (B) pigments, and (C) 0.1-25 parts (based on the resins and the pigment solids = 100) cellulose composites. Thus, a storage-stable paste comprising a cellulose-xanthan gum-glucose composites, ammonium-containing epoxy resin, and pigments was mixed with bisphenol A glycidyl ether homopolymer (Epikote 828EL)-bisphenol A-diethylenetriamine-N-ethylmonoethanolamine copolymer, crude MDI (Cosmonate M 200)-2,2-dimethylolbutanoic acid blocked copolymer, and water, and electrodeposited on a steel sheet to give a coating showing good corrosion and impact resistance.

CC 42-10 (Coatings, Inks, and Related Products)

ST storage stability electrodeposit coating pigment dispersant cellulose composite; glucose xanthan gum cellulose composite pigment dispersant epoxy electrodeposition

IT Electrodeposits

(anticorrosive; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)

IT Ionene polymers

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)

IT Dispersing agents

(cellulose composite; cellulose composite dispersants for



- storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-phenolic-polyamine-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Polyamines  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-phenolic-polyurethane-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyamine-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Phenolic resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyamine-polyurethane-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Polyamines  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyurethane-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenolic-polyamine-polyurethane-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyurethane-; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT 51395-75-6, Avicel RC-N 81  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(Avicel RC-N 30, composite with gum and sugar; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT 884595-81-7P 884595-82-8P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT 50-99-7, Glucose, uses 9000-36-6, Gum karaya 9004-53-9, Dextrin 11138-66-2, Xanthan gum  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(composite with cellulose; cellulose composite dispersants for storage-stable pigment pastes for aqueous electrodeposition coatings)
- IT 9004-34-6, Ceoluscream FP 03, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(composite with gum and sugar; cellulose composite dispersants for

storage-stable pigment pastes for aqueous electrodeposition coatings)  
 IT 884595-81-7P 884595-82-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)

(cellulose composite dispersants for storage-stable pigment pastes for  
 aqueous electrodeposition coatings)

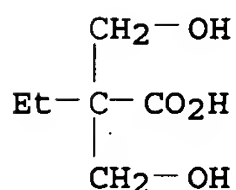
RN 884595-81-7 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with N-(2-aminoethyl)-1,2-  
 ethanediamine, 2-(ethylamino)ethanol, 4,4'-(1-  
 methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-  
 phenyleneoxymethylene)]bis[oxirane] and polymethylenepolyphenylene  
 isocyanate (9CI) (CA INDEX NAME)

CM 1

CRN 10097-02-6

CMF C6 H12 O4



CM 2

CRN 9016-87-9

CMF Unspecified

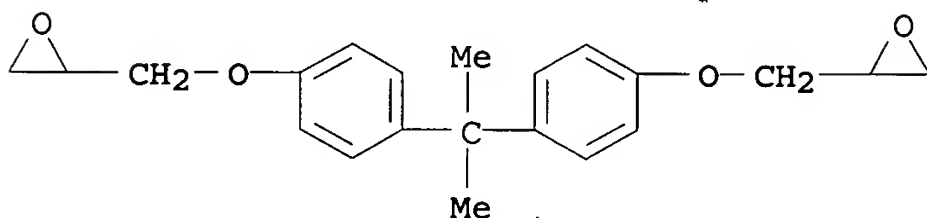
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 1675-54-3

CMF C21 H24 O4



CM 4

CRN 111-40-0

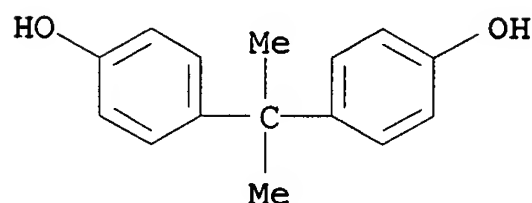
CMF C4 H13 N3



CM 5

CRN 110-73-6  
CMF C4 H11 N OEtNH-CH<sub>2</sub>-CH<sub>2</sub>-OH

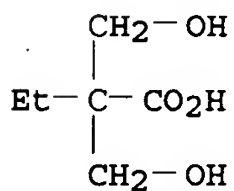
CM 6

CRN 80-05-7  
CMF C15 H16 O2

RN 884595-82-8 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, formaldehyde, 2,2'-iminobis[ethanol], 4,4'-(1-methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], phenol and polymethylenepolyphenylene isocyanate (9CI) (CA INDEX NAME)

CM 1

CRN 10097-02-6  
CMF C6 H12 O4

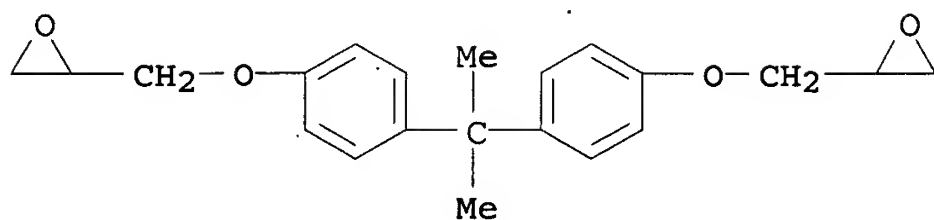
CM 2

CRN 9016-87-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

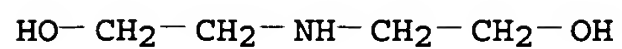
CRN 1675-54-3  
CMF C21 H24 O4



CM 4

CRN 111-42-2

CMF C4 H11 N O2



CM 5

CRN 111-40-0

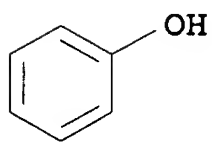
CMF C4 H13 N3



CM 6

CRN 108-95-2

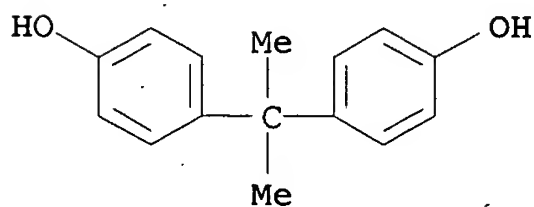
CMF C6 H6 O



CM 7

CRN 80-05-7

CMF C15 H16 O2



CM 8

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

L30 ANSWER 5 OF 31 HCAPLUS . COPYRIGHT 2006 ACS on STN

AN 2005:1074087 HCAPLUS

DN 143:348802

TI Room temperature-curable one-component aqueous polyurethane compositions for coatings and printing inks

IN Miyamura, Takashi; Wada, Shuichi

PA Daiichi Kogyo Seiyaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005272618	A2	20051006	JP 2004-87410	20040324
PRAI	JP 2004-87410		20040324		

AB The compns. contain (A)  $\geq 2$  ketonic carbonyl-containing polyurethanes manufactured from (a) organic **polyisocyanates**, (b) polyester polyols having  $\geq 2$  active H reactive with NCO, and (c) compds. having ketonic carbonyl group and  $\geq 2$  active H reactive with NCO and (B) compds. having  $\geq 2$  hydrazino groups, at hydrazino/ketonic carbonyl molar ratio 0.1-3.0. Thus, phthalic anhydride-adipic acid-3-methyl-1,5-pentylene glycol copolymer polyol was treated with IPDI, diacetone acrylamide-diethanolamine adduct, 2,2-dimethylolpropionic acid, Et<sub>3</sub>N, and dipropylenetriamine to give a polyurethane, which was mixed with adipic acid hydrazide and applied on a PET film to give a coating film showing good adhesion with the substrate and water and solvent resistance.

IC ICM C08L075-04

ICS C08G018-42; C08G018-65; C08K005-24; C09D007-12; C09D175-06

CC 42-10 (Coatings, Inks, and Related Products)

ST polyurethane polyester ketone hydrazide coating ink; printing ink  
polyurethane ketone hydrazide adhesion; water resistant polyurethane coating ketone hydrazide; solvent resistant polyurethane coating ketone hydrazide

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyamine**-polyester-, block; room temperature-curable  
one-component aqueous polyurethane compns. for coatings and printing inks)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyamine**-polyester-polyurea-; room temperature-curable  
one-component aqueous polyurethane compns. for coatings and printing inks)

IT Polyureas

RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyamine**-polyester-polyurethane-; room temperature-curable  
one-component aqueous polyurethane compns. for coatings and printing inks)

IT Polyesters, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyamine**-polyurea-polyurethane-; room temperature-curable

one-component aqueous polyurethane compns. for coatings and printing inks)

IT Polyesters, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (polyamine-polyurethane-, block; room temperature-curable  
 one-component aqueous polyurethane compns. for coatings and printing inks)

IT Polyamines  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (polyester-polyurea-polyurethane-; room temperature-curable one-component aqueous  
 polyurethane compns. for coatings and printing inks)

IT Polyamines  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (polyester-polyurethane-, block; room temperature-curable one-component aqueous  
 polyurethane compns. for coatings and printing inks)

IT Inks  
 (printing, water-thinned; room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT Coating materials  
 (solvent- and water-resistant; room temperature-curable one-component aqueous  
 polyurethane compns. for coatings and printing inks)

IT 866025-81-2P, Diacetone acrylamide-diethanolamine-dimethyl sodiosulfoisophthalate-dipropylenetriamine-IPDI-Ravecarb 102-Teslac 2450-Teslac 2464 copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (comprised of actual and assumed monomers; room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT 866025-82-3P, Adipic dihydrazide-diacetone acrylamide-diethanolamine-dimethyl sodiosulfoisophthalate-dipropylenetriamine-IPDI-Ravecarb 102-Teslac 2450-Teslac 2464 copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (comprised of actual and assumed monomers; room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT 865855-90-9P, Adipic acid-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride copolymer triethylamine salt 865855-91-0P, Cyclohexanedicarboxylic acid-diacetone acrylamide-diethanolamine-ethylene glycol-IPDI-isophthalic acid-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer 865855-93-2P, Adipic acid-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer triethylamine salt 865855-95-4P, Diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-terephthalic acid copolymer triethylamine salt 865855-99-8DP, Adipic acid-2,2-dimethylolpropionic acid-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-terephthalic acid copolymer triethylamine salt, reaction products with adipic dihydrazide  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT 1071-93-8DP, Adipic dihydrazide, reaction products with NCO-terminated polyester-polyurethanes 865855-97-6DP, Adipic acid-cyclohexanedicarboxylic acid-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-ethylene glycol-IPDI-isophthalic acid-neopentyl glycol-phthalic anhydride copolymer triethylamine salt, reaction products with adipic dihydrazide  
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT 865856-01-5P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride copolymer triethylamine salt 865856-02-6P, Adipid dihydrazide-cyclohexanedicarboxylic acid-diacetone acrylamide-diethanolamine-ethylene glycol-IPDI-isophthalic acid-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer 865856-04-8P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-terephthalic acid copolymer triethylamine salt 865856-06-0P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer triethylamine salt 865856-08-2P, Adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-terephthalic acid copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

IT 865855-90-9P, Adipic acid-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride copolymer triethylamine salt. 865855-93-2P, Adipic acid-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer triethylamine salt 865855-95-4P, Diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-terephthalic acid copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

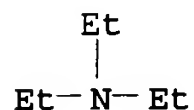
(room temperature-curable one-component aqueous polyurethane compns. for coatings and printing inks)

RN 865855-90-9 HCAPLUS  
 CN Hexanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865855-89-6

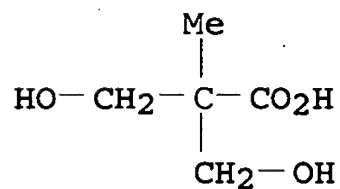
CMF (C12 H18 N2 O2 . C9 H15 N O2 . C8 H4 O3 . C6 H17 N3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

CRN 4767-03-7

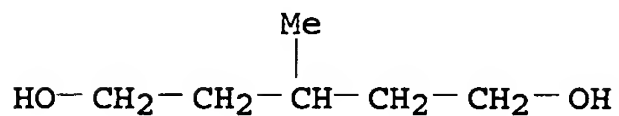
CMF C5 H10 O4



CM 4

CRN 4457-71-0

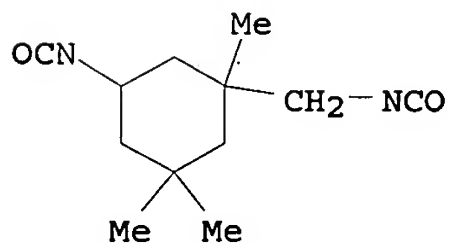
CMF C6 H14 O2



CM 5

CRN 4098-71-9

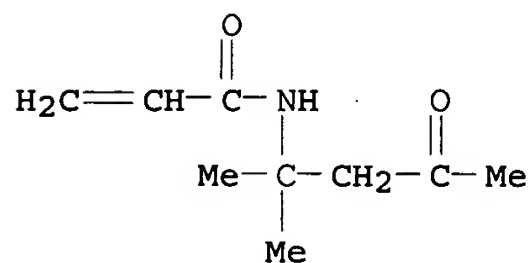
CMF C12 H18 N2 O2



CM 6



CRN 2873-97-4  
CMF C9 H15 N O2



CM 7

CRN 124-04-9  
CMF C6 H10 O4



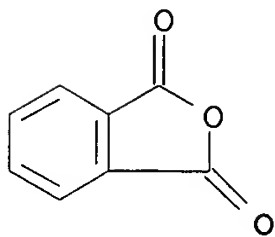
CM 8

CRN 111-42-2  
CMF C4 H11 N O2



CM 9

CRN 85-44-9  
CMF C8 H4 O3



CM 10

CRN 56-18-8  
CMF C6 H17 N3



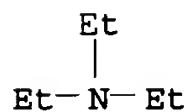
RN 865855-93-2 HCAPLUS  
CN Decanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine,

N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, hexanedioic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865855-92-1.

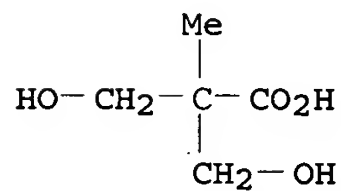
CMF (C12 H18 N2 O2 . C10 H18 O4 . C9 H15 N O2 . C8 H4 O3 . C6 H17 N3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

CRN 4767-03-7

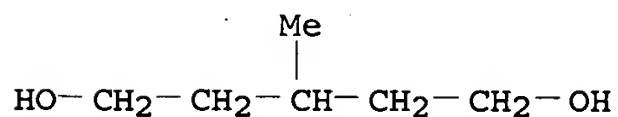
CMF C5 H10 O4



CM 4

CRN 4457-71-0

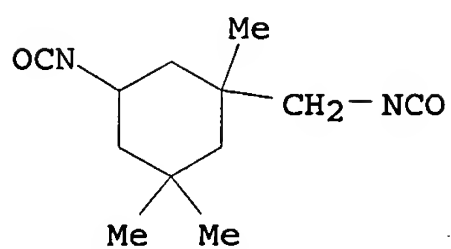
CMF C6 H14 O2



CM 5

CRN 4098-71-9

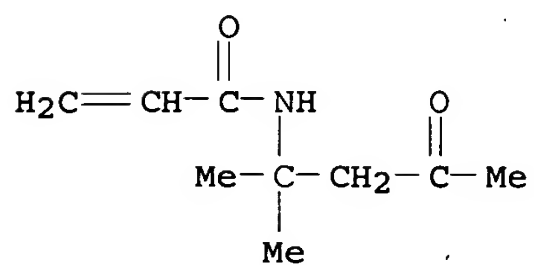
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CM 6

CRN 2873-97-4

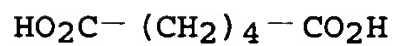
CMF C9 H15 N O2



CM 7

CRN 124-04-9

CMF C6 H10 O4



CM 8

CRN 111-42-2

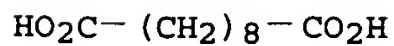
CMF C4 H11 N O2



CM 9

CRN 111-20-6

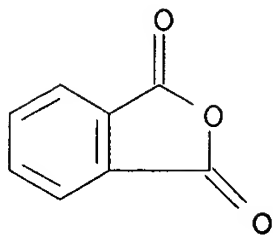
CMF C10 H18 O4



CM 10

CRN 85-44-9

CMF C8 H4 O3



CM 11

CRN 56-18-8

CMF C6 H17 N3



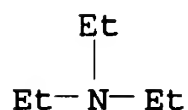
RN 865855-95-4 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865855-94-3

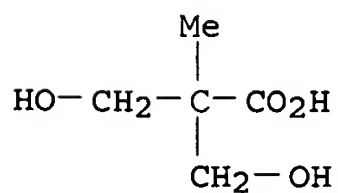
CMF (C12 H18 N2 O2 . C9 H15 N O2 . C8 H6 O4 . C6 H17 N3 . C6 H14 O2 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

CRN 4767-03-7

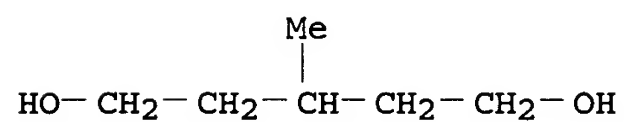
CMF C5 H10 O4



CM 4

CRN 4457-71-0

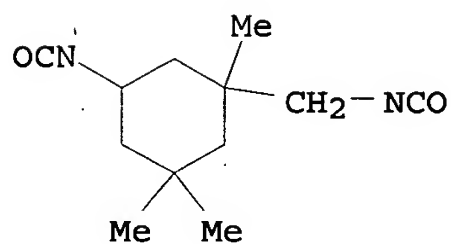
CMF C6 H14 O2



CM 5

CRN 4098-71-9

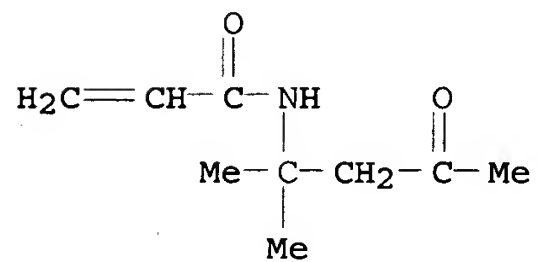
CMF C12 H18 N2 O2



CM 6

CRN 2873-97-4

CMF C9 H15 N O2



CM 7

CRN 111-42-2

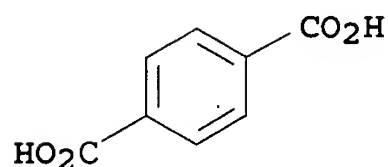
CMF C4 H11 N O2



CM 8

CRN 100-21-0

CMF C8 H6 O4



CM 9

CRN 56-18-8

CMF C6 H17 N3



IT 865856-01-5P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride copolymer triethylamine salt 865856-04-8P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-terephthalic acid copolymer triethylamine salt 865856-06-0P, Adipic acid-adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-phthalic anhydride-sebacic acid copolymer triethylamine salt 865856-08-2P, Adipic dihydrazide-diacetone acrylamide-diethanolamine-2,2-dimethylolpropionic acid-dipropylenetriamine-IPDI-3-methyl-1,5-pentylene glycol-terephthalic acid copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(room temperature-curable one-component aqueous polyurethane compns. for coatings

and printing inks)

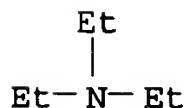
RN 865856-01-5 HCAPLUS

CN Hexanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, hexanedioic acid dihydrazide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865856-00-4

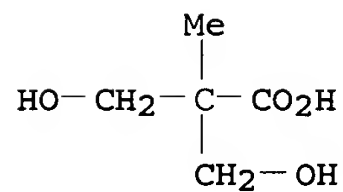
CMF (C12 H18 N2 O2 . C9 H15 N O2 . C8 H4 O3 . C6 H17 N3 . C6 H14 N4 O2 .  
C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

CRN 4767-03-7

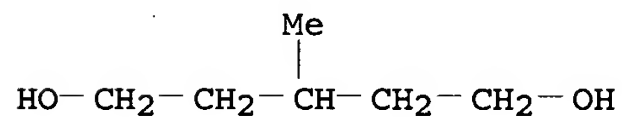
CMF C5 H10 O4



CM 4

CRN 4457-71-0

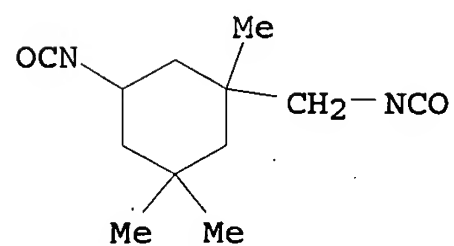
CMF C6 H14 O2



CM 5

CRN 4098-71-9

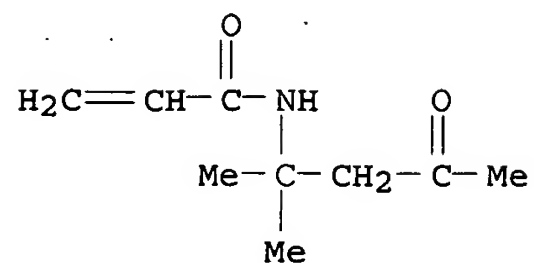
CMF C12 H18 N2 O2



CM 6

CRN 2873-97-4

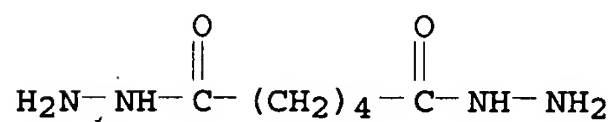
CMF C9 H15 N O2



CM 7

CRN 1071-93-8

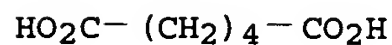
CMF C6 H14 N4 O2



CM 8

CRN 124-04-9

CMF C6 H10 O4



CM 9

CRN 111-42-2

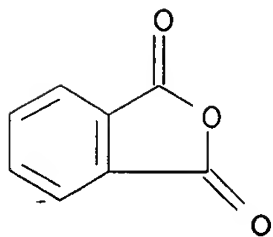
CMF C4 H11 N O2



CM 10

CRN 85-44-9

CMF C8 H4 O3



CM 11



CRN 56-18-8  
CMF C6 H17 N3

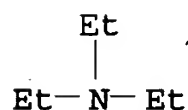


RN 865856-04-8 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, hexanedioic acid, hexanedioic acid dihydrazide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



CM 2

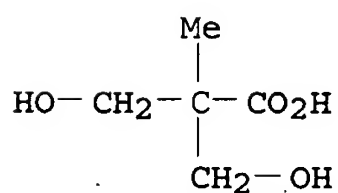
CRN 865856-03-7

CMF (C12 H18 N2 O2 . C9 H15 N O2 . C8 H6 O4 . C8 H4 O3 . C6 H17 N3 . C6 H14 N4 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

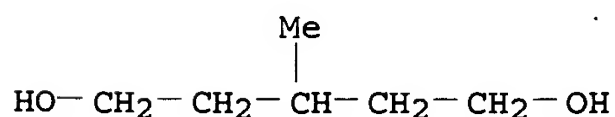
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



CM 4

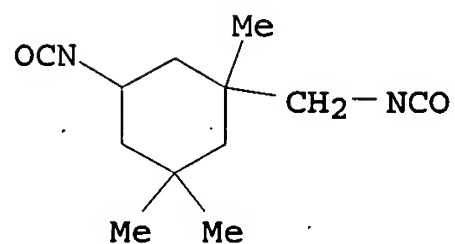
CRN 4457-71-0  
CMF C6 H14 O2



CM 5

CRN 4098-71-9

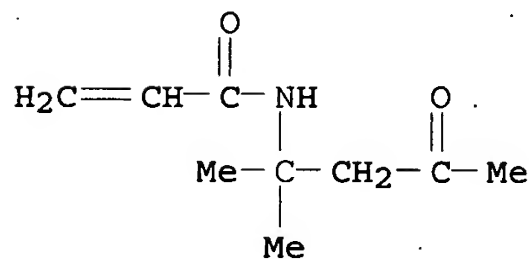
CMF C12 H18 N2 O2



CM 6

CRN 2873-97-4

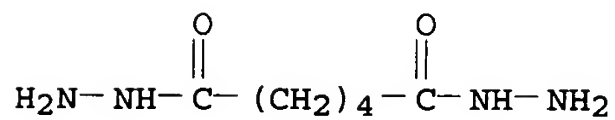
CMF C9 H15 N O2



CM 7

CRN 1071-93-8

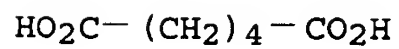
CMF C6 H14 N4 O2



CM 8

CRN 124-04-9

CMF C6 H10 O4



CM 9

CRN 111-42-2

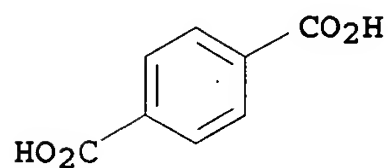
CMF C4 H11 N O2



CM 10

CRN 100-21-0

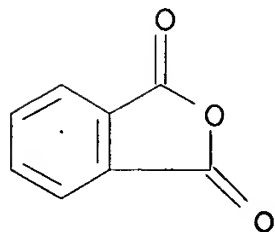
CMF C8 H6 O4



CM 11

CRN 85-44-9

CMF C8 H4 O3



CM 12

CRN 56-18-8

CMF C6 H17 N3



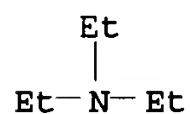
RN 865856-06-0 HCAPLUS

CN Decanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, hexanedioic acid, hexanedioic acid dihydrazide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM. 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865856-05-9

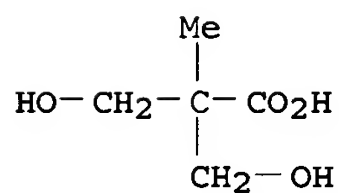
CMF (C12 H18 N2 O2 . C10 H18 O4 . C9 H15 N O2 . C8 H4 O3 . C6 H17 N3 . C6 H14 N4 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

CRN 4767-03-7

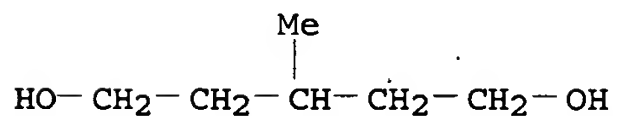
CMF C5 H10 O4



CM 4

CRN 4457-71-0

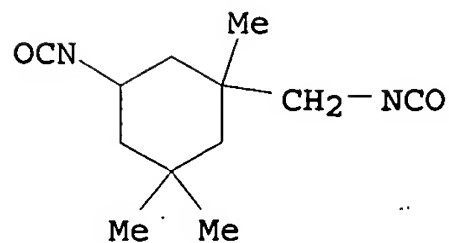
CMF C6 H14 O2



CM 5

CRN 4098-71-9

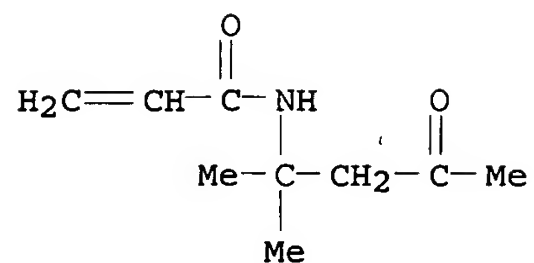
CMF C12 H18 N2 O2



CM 6

CRN 2873-97-4

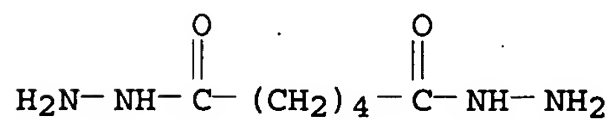
CMF C9 H15 N O2



CM 7

CRN 1071-93-8

CMF C6 H14 N4 O2



CM 8

CRN 124-04-9

CMF C6 H10 O4



CM 9

CRN 111-42-2

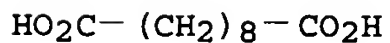
CMF C4 H11 N O2



CM 10

CRN 111-20-6

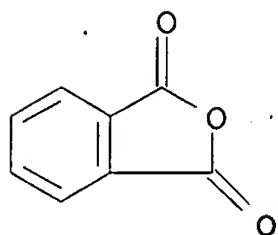
CMF C10 H18 O4



CM 11

CRN 85-44-9

CMF C8 H4 O3



CM 12

CRN 56-18-8

CMF C6 H17 N3



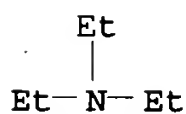
RN 865856-08-2 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, hexanedioic acid dihydrazide, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 865856-07-1

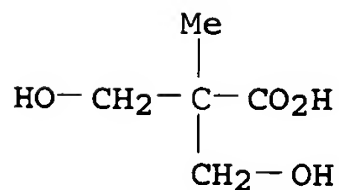
CMF (C12 H18 N2 O2 . C9 H15 N O2 . C8 H6 O4 . C6 H17 N3 . C6 H14 N4 O2 . C6 H14 O2 . C5 H10 O4 . C4 H11 N O2)x

CCI PMS

CM 3

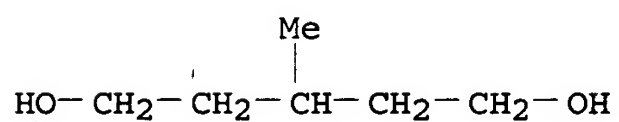
CRN 4767-03-7

CMF C5 H10 O4



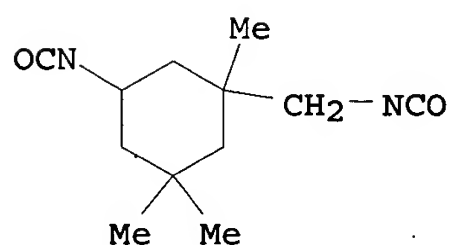
CM 4

CRN 4457-71-0  
CMF C6 H14 O2



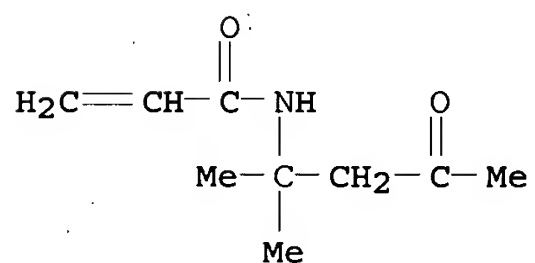
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



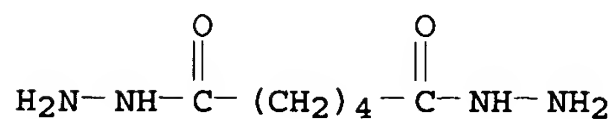
CM 6

CRN 2873-97-4  
CMF C9 H15 N O2



CM 7

CRN 1071-93-8  
CMF C6 H14 N4 O2



CM 8

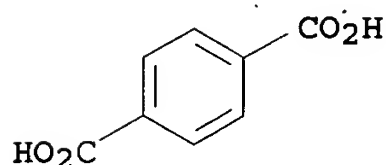
CRN 111-42-2  
CMF C4 H11 N O2



CM 9

CRN 100-21-0

CMF C8 H6 O4



CM 10

CRN 56-18-8

CMF C6 H17 N3



L30 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:982665 HCAPLUS

DN 143:249492

TI Aqueous polyurethane emulsions with good storage stability, artificial leather sheets therefrom, and materials therefor showing no migration

IN Iwasaki, Yoshiyuki; Suzuki, Kazumitsu

PA Sanyo Chemical Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005239841	A2	20050908	JP 2004-50413	20040225
PRAI	JP 2004-50413		20040225		

AB The emulsions comprise (A) nonionic surfactants consisting of alkoxyated aliphatic alcs. (a0), prepared by direct addition of alkylene oxides on aliphatic

(C) alcs., (B) polyurethanes with carboxylate/sulfonate concentration 0.01-1.5%,

water-soluble inorg. salts, and (D) aqueous media. The alkoxyated alcs. a0 comprise mixts. of  $\geq 2$  kinds of  $\text{R10}[(\text{C}_2\text{H}_4\text{O})_m(\text{AO})_n](\text{C}_2\text{H}_4\text{O})_p\text{H}$  [ $\text{R1} = \text{C}_8\text{-24 aliphatic hydrocarbyl, C}_8\text{-24 alicyclic hydrocarbyl; A} = \text{C}_{\geq 3}$  alkylene;  $m \geq 0$ ; average  $m = 0\text{-}4$ ;  $n \geq 0$ ; average  $n = 0\text{-}3$ ;  $p \geq 0$ ; average  $p = 1\text{-}80$ ; average  $(m + n + p) = 3\text{-}81$ ; average  $(m + p)/(m + n + p) \geq 0.5$ ;

$[(\text{C}_2\text{H}_4\text{O})_m(\text{AO})_n]$  show block or random structure when  $m \neq 0$ ,  $n \neq 0$  and show  $\text{Mw/Mn} \leq 0.030 + \text{Ln}(v) + 1.010$  ( $v < 10$ ) or  $\text{Mw/Mn} \leq -0.026 + \text{Ln}(v) + 1.139$  ( $v \geq 10$ ) [ $v = \text{average } (m + n + p)$ ;

$\text{Ln}(v) = \text{natural logarithm of } v]$ . The polyurethanes B may comprise those



prepared by reaction of polyisocyanates, polymer polyols, and compds. having carboxylate/sulfonate groups and  $\geq 2$  of active H. Also claimed are materials for artificial leather sheets, prepared by imparting the emulsions to fibrous substrates and solidifying under dry heat. Thus, poly(butylene adipate) diol was reacted with  $\alpha, \alpha$ -dimethylolpropionic acid and 4,4'-dicyclohexylmethane diisocyanate to give NCO-terminated urethane prepolymer, which was mixed with Et3N and ethoxylated lauryl alc., emulsified, chain extended with diethylene triamine and isophorone diamine, and further mixed with Na2SO4 to give an emulsion. PET fiber-based nonwoven fabric was impregnated with the emulsion and heat dried to give an artificial leather sheet, showing no migration and good touch.

IC ICM C08L075-04

ICS C08G018-48; C08K003-00; D06M015-53; D06M015-568; D06N003-14

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40

ST artificial leather sheet aq polyurethane emulsion stability; ethoxylated lauryl alc nonionic surfactant polyurethane emulsion; carboxylate sulfonate polyurethane PET nonwoven fabric leather; sodium sulfate calcium chloride polyurethane solidification agent

IT Alcohols, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(alkoxylated, aliphatic, surfactants; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Leather substitutes

Nonwoven fabrics

(aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(block, monoalkyl ethers, surfactants; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(carboxylate/sulfonate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyester fibers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(fabrics, nonwoven; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(mono(alkyl group)-terminated, surfactants; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Surfactants

(nonionic; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-polyester-polyurea-, block, carboxylate-containing;

aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Polyureas

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-polyester-polyurethane-, block, carboxylate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Polyesters, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-polyurea-polyurethane-, block, carboxylate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-polyurea-, block, carboxylate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Polyamines

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-polyurea-polyurethane-, block, carboxylate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Polyureas

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-polyurethane-, block, carboxylate-containing; aqueous

## polyurethane

emulsions with good storage stability for artificial leather sheets)

## IT Polyesters, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurea-polyurethane-, block, carboxylate-containing; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT Salts, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (solidification agents; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT 830334-72-0, Ethylene oxide-propylene oxide triblock copolymer monooleate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT 863478-10-8P 863478-12-0P 863478-14-2P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(comprised of actual and assumed monomers; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT 25038-59-9, uses

RL: TEM (Technical or engineered material use); USES (Uses) (fibers, nonwoven fabrics; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

## IT 7757-82-6, Sodium sulfate, uses 10043-52-4, Calcium chloride, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (solidification agents; aqueous polyurethane emulsions with good storage

stability for artificial leather sheets)  
 IT 9002-92-0, Ethoxylated lauryl alcohol  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (surfactants; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

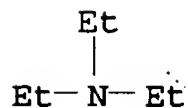
IT 863478-10-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (comprised of actual and assumed monomers; aqueous polyurethane emulsions with good storage stability for artificial leather sheets)

RN 863478-10-8 HCAPLUS  
 CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, butanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 1,1'-methylenebis[4-isocyanatocyclohexane], block, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 863478-09-5

CMF (C15 H22 N2 O2 . C10 H22 N2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3 . C4 H10 O2)x

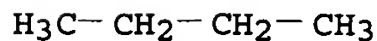
CCI PMS

CM 3

CRN 25265-75-2

CMF C4 H10 O2

CCI IDS

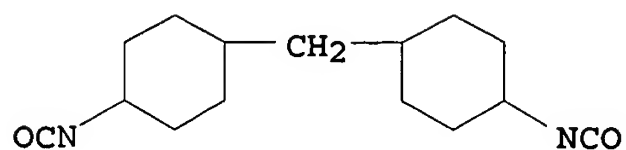


2 ( D1-OH )

CM 4

CRN 5124-30-1

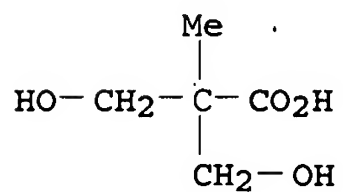
CMF C15 H22 N2 O2



CM 5

CRN 4767-03-7

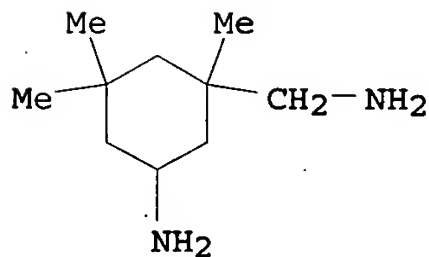
CMF C5 H10 O4



CM 6

CRN 2855-13-2

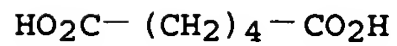
CMF C10 H22 N2



CM 7

CRN 124-04-9

CMF C6 H10 O4



CM 8

CRN 111-40-0

CMF C4 H13 N3



DN 143:249839  
 TI Aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding and method for antistatic treatment therewith  
 IN Katayama, Mitsuyoshi; Miyamura, Takashi; Sato, Kazuo; Wada, Shuichi  
 PA Daiichi Kogyo Seiyaku Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005232220	A2	20050902	JP 2004-39799	20040217
PRAI	JP 2004-39799		20040217		

AB The dispersions comprise polyurethanes prepared by chain extension of free-NCO-terminated urethane prepolymers, consisting of (A)  $\geq 2$ -active H-containing polyols, (B) organic **polyisocyanates**, and (C) hydrophilization agents, with water and/or polyamines and contain  $\text{LiN}(\text{O}_2\text{SCF}_3)_2$  and/or  $\text{LiC}(\text{O}_2\text{SCF}_3)_3$  (added as solns. dissolved in the polyols A, before dispersing in water). In the process, the dispersions are attached on (or kneaded into) works (e.g., plastics, plastic films, resin foams, or synthetic fibers) for imparting antistatic property. Thus, Kuraray Polyol P 2020 (3-methyl-1,5-pentanediol-terephthalic acid copolymer) was reacted with  $\text{LiN}(\text{O}_2\text{SCF}_3)_2$ -dissolved Hiflex 607 (ethylene oxide-propylene oxide copolymer polyol), isophorone **diisocyanate**, and dimethylolpropionic acid and chain extended with dipropylene triamine to give a polyurethane dispersion. A PET film was coated with the dispersion and dried to give a coating layer, showing surface resistivity  $7 + 10^9 \Omega/\text{box}$ . and cross-cut adhesion test 100/100.

IC ICM C08L075-04  
 ICS C08G018-10; C08G018-65; C08K005-56; D06M013-503; D06M013-51; D06M015-568

CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38, 40

ST antistatic polyurethane waterborne dispersion coating adhesiveness; plastic film foam fiber antistatic treatment coating; lithium fluoromethanesulfonimide fluoromethanesulfonylmethide antistatic agent

IT Coating materials  
 (antistatic; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT Antistatic agents  
 Plastic films  
 (method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT Plastic foams  
 Plastics, uses  
 Polyesters, uses  
 Synthetic fibers  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (polyamine-polyester-polyoxyalkylene-polyurea-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyureas  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyester-polyoxyalkylene-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyester-polyurea-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurea-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurea-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyureas  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyurea-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyoxyalkylene-polyurea-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyamines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyoxyalkylene-polyurea-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT Polyamines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-polyurea-polyurethane-; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)
- IT 90076-65-6, Lithiumbis(trifluoromethanesulfonyl)imide 132404-42-3, Lithiumtris(trifluoromethanesulfonyl)methane

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (antistatic agents; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT 25038-59-9, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(films; method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT 863328-94-3P 863328-95-4P 863328-96-5P

863328-97-6P 863328-98-7P 863328-99-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

IT 863328-94-3P 863328-95-4P 863328-96-5P

863328-98-7P 863328-99-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(method for antistatic treatment of films, foams, and fibers with aqueous dispersions of antistatic polyurethanes showing good adhesiveness and no bleeding)

RN 863328-94-3 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, Hiflex 607, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 863324-22-5

CMF Unspecified

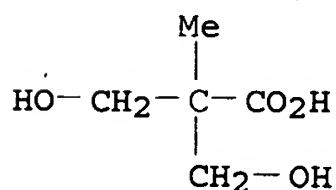
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 4767-03-7

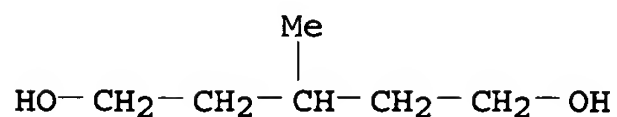
CMF C5 H10 O4



CM 3

CRN 4457-71-0

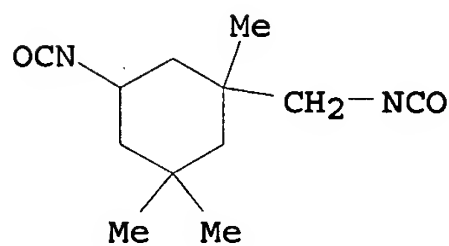
CMF C6 H14 O2



CM 4

CRN 4098-71-9

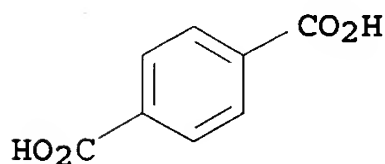
CMF C12 H18 N2 O2



CM 5

CRN 100-21-0

CMF C8 H6 O4



CM 6

CRN 56-18-8

CMF C6 H17 N3



RN 863328-95-4 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, 1,4-benzenedicarboxylic acid, 1,4-butanediol, decanedioic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and Polyhardner D 340W (9CI) (CA INDEX NAME)

CM 1

CRN 863324-25-8

CMF Unspecified

CCI PMS, MAN

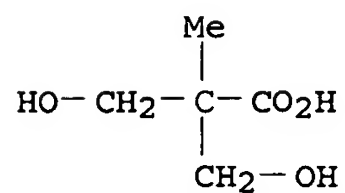
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CM 2

CRN 4767-03-7

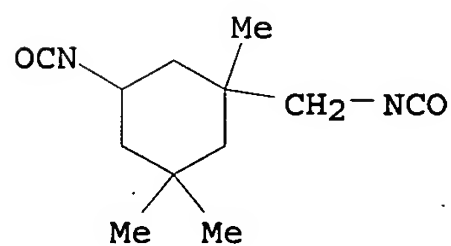
CMF C5 H10 O4



CM 3

CRN 4098-71-9

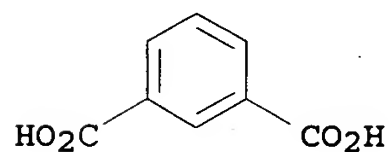
CMF C12 H18 N2 O2



CM 4

CRN 121-91-5

CMF C8 H6 O4



CM 5

CRN 111-20-6

CMF C10 H18 O4



CM 6

CRN 110-63-4

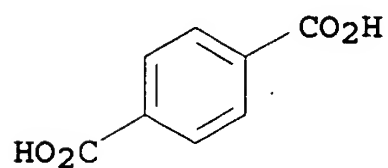
CMF C4 H10 O2



CM 7

CRN 100-21-0

CMF C8 H6 O4



CM 8

CRN 56-18-8

CMF C6 H17 N3



RN 863328-96-5 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with N-(3-aminopropyl)-1,3-propanediamine, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and PEG 600S (9CI) (CA INDEX NAME)

CM 1

CRN 863328-36-3

CMF Unspecified

CCI PMS, MAN

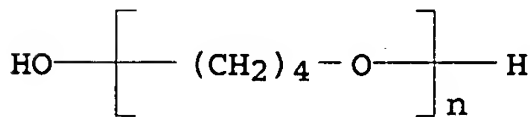
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CM 2

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

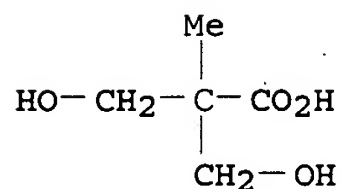
CCI PMS



CM 3

CRN 4767-03-7

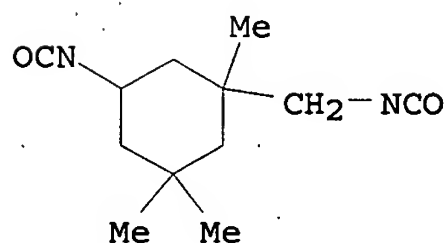
CMF C5 H10 O4



CM 4

CRN 4098-71-9

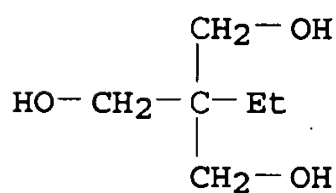
CMF C12 H18 N2 O2



CM 5

CRN 77-99-6

CMF C6 H14 O3



CM 6

CRN 56-18-8

CMF C6 H17 N3



RN 863328-98-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, hexanedioic acid, Hiflex 210, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 863328-76-1

CMF Unspecified

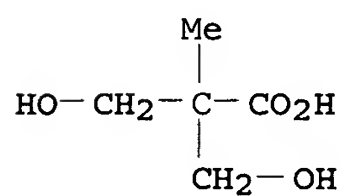
CCI PMS, MAN

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CM 2

CRN 4767-03-7

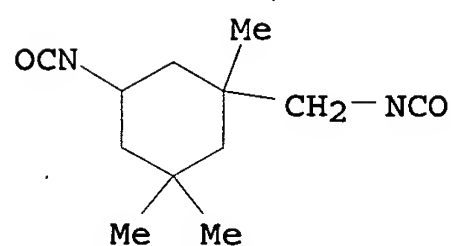
CMF C5 H10 O4



CM 3

CRN 4098-71-9

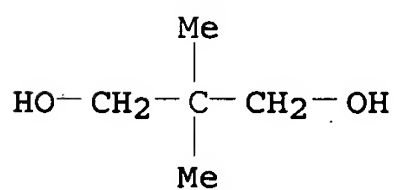
CMF C12 H18 N2 O2



CM 4

CRN 126-30-7

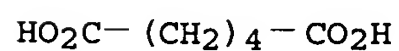
CMF C5 H12 O2



CM 5

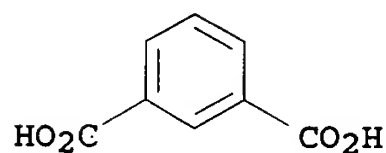
CRN 124-04-9

CMF C6 H10 O4



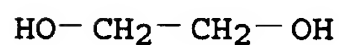
CM 6

CRN 121-91-5  
CMF C8 H6 O4



CM 7

CRN 107-21-1  
CMF C2 H6 O2



CM 8

CRN 56-18-8  
CMF C6 H17 N3



RN 863328-99-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, 1,4-benzenedicarboxylic acid, 1,4-butanediol, decanedioic acid, Hiflex 210, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

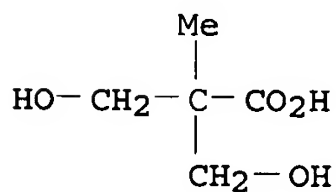
CM 1

CRN 863328-76-1  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

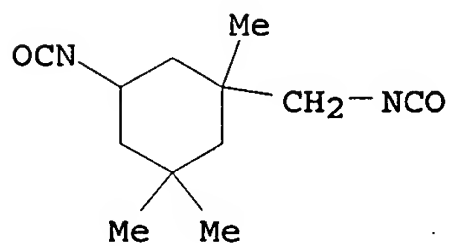
CM 2

CRN 4767-03-7  
CMF C5 H10 O4



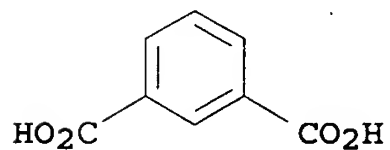
CM 3

CRN 4098-71-9  
CMF C12 H18 N2 O2



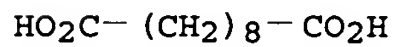
CM 4

CRN 121-91-5  
CMF C8 H6 O4



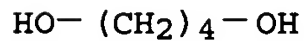
CM 5

CRN 111-20-6  
CMF C10 H18 O4



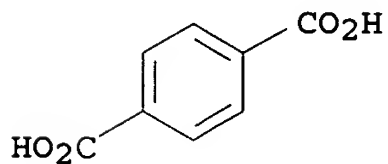
CM 6

CRN 110-63-4  
CMF C4 H10 O2



CM 7

CRN 100-21-0  
CMF C8 H6 O4



CM 8

CRN 56-18-8

CMF C6 H17 N3



L30 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:510486 HCAPLUS

DN 141:55944

TI Manufacture of anionic thermosetting resins with low AOX (adsorbable organic halogens) and excellent storage stability and manufacture of paper containing them

IN Yoshitani, Koji; Kawaguchi, Koji; Sakai, Kazuhiro

PA Seiko PMC Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, '22 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004175818	A2	20040624	JP 2002-340075	20021122
PRAI	JP 2002-340075		20021122		

AB The resins, useful for wet paper strengthening agents or craping aids, are manufactured by reacting polyalkylene-polyamines (A), dibasic carboxylic acids (B), and urea derivs. (C) and reacting the resulting polyamide-polyamine-polyureas and epihalohydrines (D) and basic substances (E) simultaneously or successively. Thus, reacting 60%-solids adipic acid-diethylenetriamine-urea copolymer 87, epichlorohydrin 25.4, and 30% NaOH 16 g, adjusting it to pH 3.0 with H2SO4, and adding 3.3 g 88% formic acid to it gave a solution with no gelation after 4 wk at 40° and AOX content 0.25%.

IC ICM C08G069-48

ICS D21H017-54; D21H019-24; D21H021-20; D21H027-00

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 38

ST polyamide polyamine polyurea epihalohydrin storage stability; paper strength agent polyurea AOX redn; anionic thermosetting resin paper craping aid

IT Paper

(manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT Polyureas

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamide-polyamine-; manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT Polyamines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamide-polyurea-; manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT Polyamides, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
 (polyamine-polyurea-; manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT Plastics, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (thermosetting, anionic; manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT 57-11-4DP, Stearic acid, reaction products with diethylenetriamine, adipic acid, urea, epichlorohydrin, and sodium hydroxide 57-13-6DP, Urea, reaction products with diethylenetriamine, adipic acid, stearic acid or monoethanolamine, epichlorohydrin, and sodium hydroxide 106-89-8DP, Epichlorohydrin, reaction products with polyamide-polyamine-polyurea and basic substance 109-89-7DP, Diethylamine, reaction products with polyamide-polyamine-polyurea 111-40-0DP, Diethylenetriamine, reaction products with stearic acid or monoethanolamine, adipic acid, urea, epichlorohydrin, and sodium hydroxide 124-04-9DP, Adipic acid, reaction products with diethylenetriamine, stearic acid or monoethanolamine, urea, epichlorohydrin, and sodium hydroxide 497-19-8DP, Sodium carbonate, reaction products with polyamide-polyamine-polyurea 1310-58-3DP, Potassium hydroxide, reaction products with polyamide-polyamine-polyurea 1310-73-2DP, Sodium hydroxide, reaction products with polyamide-polyamine-polyurea 32144-20-0DP, reaction products with basic substances 705263-88-3DP, reaction products with sodium hydroxide  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

IT 705263-88-3DP, reaction products with sodium hydroxide  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of anionic thermosetting resins with low AOX, good storage stability, and no carcinogenicity for papermaking)

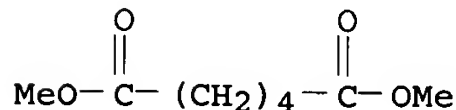
RN 705263-88-3 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and urea (9CI) (CA INDEX NAME)

CM 1

CRN 627-93-0

CMF C8 H14 O4



CM 2

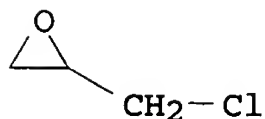
CRN 111-40-0

CMF C4 H13 N3

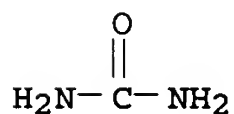




CM 3

CRN 106-89-8  
CMF C3 H5 Cl O

CM 4

CRN 57-13-6  
CMF C H4 N2 O

L30 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:392508 HCAPLUS

DN 140:407529

TI Preparation of polyamine derivatives and application thereof

IN Pardoen, Johannes Adrianus; Brinkhuis, Richard Hendrikus Gerrit;  
Venderbosch, Rudolf Anthonius Maria

PA Akzo Nobel N.V., Neth.

SO PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

*application*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004039865	A1	20040513	WO 2003-EP11647	20031020
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2503735	AA	20040513	CA 2003-2503735	20031020
	AU 2003276126	A1	20040525	AU 2003-276126	20031020
	US 2004127608	A1	20040701	US 2003-687766	20031020
	EP 1556436	A1	20050727	EP 2003-809726	20031020
	EP 1556436	B1	20060621		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 AT 330983 E 20060715 AT 2003-809726 20031020  
 PRAI EP 2002-79516 A 20021029  
 WO 2003-EP11647 W 20031020  
 OS MARPAT 140:407529  
 AB Polyamines with  $\geq 1$  -NH<sub>2</sub> functions and  $\geq 1$  s amine functions are reacted in a first step with  $\geq 1$  lactones, hydroxyacids, cyclic carbonates, or mixts. thereof, to form a polyamine-derived compound with amide and/or urethane groups, which is reacted in a second step with  $\geq 1$  at least bifunctional amine-specific reagents to form an intermediate optionally comprising ester and/or carbonate groups, wherein in the second step optionally an addnl. amine modifier is co-reacted and in the intermediate at least two polyamine residues, or if a modifier is used, at least one polyamine residue and at least one optional amine modifier residue, are linked by said bifunctional amine-specific reagent. The prepared polyamine derivs. can be used as a pigment dispersant or in printing ink or coating composition. Thus, diethylene triamine,  $\epsilon$ -caprolactone, hexamethylene diisocyanate, hexahydrophthalic anhydride, and oxiranylmethyl neodecanate (Cardura E 10), were reacted to receive a pigment dispersant with polyester tails.  
 IC ICM C08G073-02  
 ICS C07C235-10; C07C271-20  
 CC 37-2 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42  
 ST polyamide polyester polyurethane polyurea polyamine deriv pigment dispersant coating  
 IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamide-polyester-; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamide-polyether-; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Polyesters, preparation  
 Polyethers, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamide-polyurethane-; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Amines, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**polyamines**, nonpolymeric; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Polyamides, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyester-polyurethane-; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Polyamides, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyether-polyurethane-; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)  
 IT Coating materials  
 Dispersing agents  
 (preparation of **polyamine** derivs. for pigment dispersant, printing

ink, or coating)

IT Inks

(printing; preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)

IT 56091-36-2, Accelerator AMC 2 688364-72-9, Nuodex ZN 12

RL: CAT (Catalyst use); USES (Uses)

(preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)IT 688072-44-8P 688330-21-4P,  $\epsilon$ -Caprolactone-diethylene triamine-hexamethylene **diisocyanate**-Jeffamine M 1000 copolymer 688364-74-1PRL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)(preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)IT 688072-44-8P 688330-21-4P,  $\epsilon$ -Caprolactone-diethylene triamine-hexamethylene **diisocyanate**-Jeffamine M 1000 copolymer 688364-74-1PRL: IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)(preparation of **polyamine** derivs. for pigment dispersant, printing ink, or coating)

RN 688072-44-8 HCAPLUS

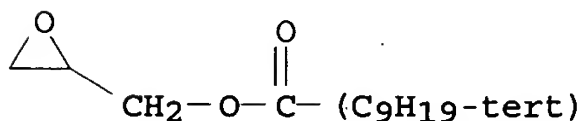
CN tert-Decanoic acid, oxiranylmethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,6-diisocyanatohexane, hexahydro-1,3-isobenzofurandione and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 71206-09-2

CMF C13 H24 O3

CCI IDS



CM 2

CRN 822-06-0

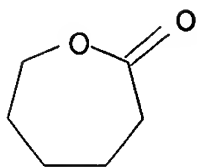
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

CM 3

CRN 502-44-3

CMF C6 H10 O2



CM 4

CRN 111-40-0

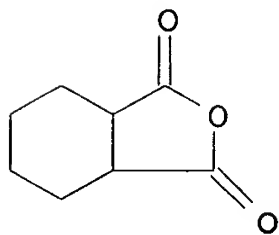
CMF C4 H13 N3



CM 5

CRN 85-42-7

CMF C8 H10 O3



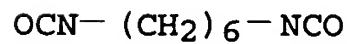
RN 688330-21-4 HCAPLUS

CN 2-Oxepanone, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
1,6-diisocyanatohexane and methyloxirane polymer with oxirane  
2-aminopropyl methyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 822-06-0

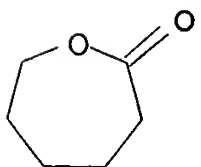
CMF C8 H12 N2 O2



CM 2

CRN 502-44-3

CMF C6 H10 O2



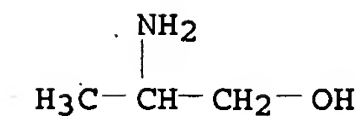
CM 3

CRN 111-40-0  
CMF C4 H13 N3

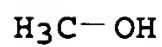
CM 4

CRN 83713-01-3  
CMF C3 H9 N O . (C3 H6 O . C2 H4 O)x . C H4 O

CM 5

CRN 6168-72-5  
CMF C3 H9 N O

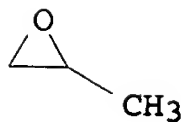
CM 6

CRN 67-56-1  
CMF C H4 O

CM 7

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 8

CRN 75-56-9  
CMF C3 H6 O

CM 9

CRN 75-21-8

CMF C2 H4 O



RN 688364-74-1 HCAPLUS

CN tert-Decanoic acid, oxiranylmethyl ester, polymer with  
N-(2-aminoethyl)-1,2-ethanediamine, 1,6-diisocyanatohexane,  
hexahydro-1,3-isobenzofurandione, K-Flex XM 3323 and 2-oxepanone (9CI)  
(CA INDEX NAME)

CM 1

CRN 688364-70-7

CMF Unspecified

CCI MAN

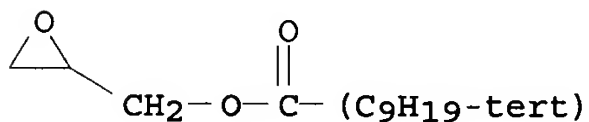
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 71206-09-2

CMF C13 H24 O3

CCI IDS



CM 3

CRN 822-06-0

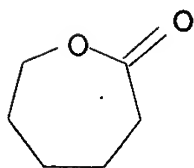
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

CM 4

CRN 502-44-3

CMF C6 H10 O2



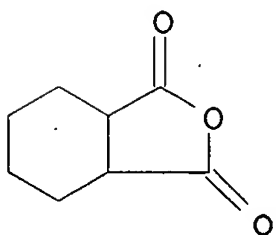
CM 5

CRN 111-40-0  
CMF C4 H13 N3



CM 6

CRN 85-42-7  
CMF C8 H10 O3



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:134142 HCAPLUS  
DN 140:165549  
TI Resin compositions with good water resistance and ink receptability for  
paper coating  
IN Kawamura, Akira  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004052190	A2	20040219	JP 2002-214916	20020724
	JP 3821474	B2	20060913		
PRAI	JP 2002-214916		20020724		

AB Title compns. comprise resins obtained by polycondensation of (A) free-carboxyl group-containing polycondensated polymers obtained from glycols and alicyclic dibasic carboxylic acids, (B) polyamines, (C) ureas, and (D) alkylation agents, where the number of moles of the polyamines is 1-5 mol based on polycondensated polymers. Thus, methyltetrahydrophthalic anhydride 373.9, tetrahydrophthalic anhydride 1369.3, and ethylene glycol 349.1 g were polymerized to give a polyester containing free-carboxyl group, 743.6

g of which was reacted with 877.3 g triethylenetetramine and 21.6 g 85% aqueous ε-caprolactam solution to give 60.0%-solids polyester-polyamide-polyamine solution, 850.3 g of which was reacted with 80.1 g epichlorohydrin at 65-75° to give 60%-solids epichlorohydrin-modified polyester-polyamide-polyamine solution, 240.6 g of the resulting polymer solution was reacted with 48.5 g urea to give a resin with solid content 60.9%, pH 8.44, viscosity 153 mPa-s, 0.6 parts (solid based) of which was mixed with Ultra White 90 60, Carbital 90 40, polyacrylic acid type pigment dispersant, 0.2, and aqueous binder 15 parts, applied on a paper, and dried at 120° for 30 s to give a test piece with good water

resistance, air permeability, and ink receptability.

IC ICM D21H019-24  
ICS C08G069-44

CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 43

ST resin compn water resistance ink receptability paper coating;  
epichlorohydrin modified polyester polyamide plyamine prepn

IT Kaolin, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(Ultra White 90, pigments; resin compns. with good water resistance and  
ink receptability for paper coating)

IT Binders  
(aqueous; resin compns. with good water resistance and ink receptability  
for paper coating)

IT Paper  
(coated; resin compns. with good water resistance and ink receptability  
for paper coating)

IT Polyesters, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(polyamide-polyamine-; resin compns. with good water  
resistance and ink receptability for paper coating)

IT **Polyamines**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(polyamide-polyester-; resin compns. with good water resistance and ink  
receptability for paper coating)

IT Polyamides, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(polyamine-polyester-; resin compns. with good water  
resistance and ink receptability for paper coating)

IT Pigments, nonbiological  
(resin compns. with good water resistance and ink receptability for  
paper coating)

IT Paper  
(substrates; resin compns. with good water resistance and ink  
receptability for paper coating)

IT Coating materials  
(water-resistant; resin compns. with good water resistance and ink  
receptability for paper coating)

IT 9003-55-8, Butadiene-styrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder; resin compns. with good water resistance and ink receptability  
for paper coating)

IT 471-34-1, Carbital 90, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment; resin compns. with good water resistance and ink  
receptability for paper coating)

IT 106-89-8DP, Epichlorohydrin, reaction products with polyester-polyamide-  
**polyamines** 149-57-5DP, 2-Ethylhexanoic acid, reaction products  
with polyesters and **polyamines** and caprolactam  
528891-52-3DP, reaction products with polyester-polyamide-  
**polyamines** 656821-58-8DP, reaction products with  
epichlorohydrin  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP



(Preparation); USES (Uses)

(resin compns. with good water resistance and ink receptability for paper coating)

IT 528891-52-3DP, reaction products with polyester-polyamide-polyamines 656821-58-8DP, reaction products with epichlorohydrin

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(resin compns. with good water resistance and ink receptability for paper coating)

RN 528891-52-3 HCAPLUS

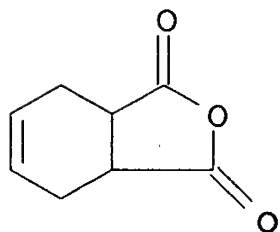
CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, 1,2-ethanediol, 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione and 3a,4,7,7a-tetrahydromethyl-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 26590-20-5

CMF C9 H10 O3

CCI IDS

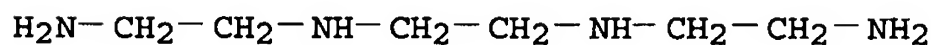


D1-Me

CM 2

CRN 112-24-3

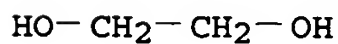
CMF C6 H18 N4



CM 3

CRN 107-21-1

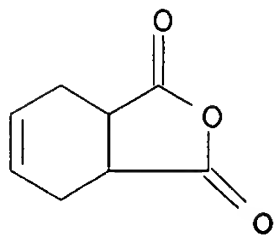
CMF C2 H6 O2



CM 4

CRN 85-43-8

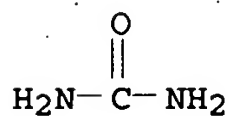
CMF C8 H8 O3



CM 5

CRN 57-13-6

CMF C H4 N2 O



RN 656821-58-8 HCAPLUS

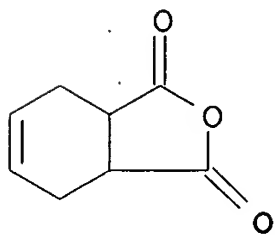
CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  
1,2-ethanediol, hexahydro-2H-azepin-2-one, 3a,4,7,7a-tetrahydro-1,3-  
isobenzofurandione and 3a,4,7,7a-tetrahydromethyl-1,3-isobenzofurandione  
(9CI) (CA INDEX NAME)

CM 1

CRN 26590-20-5

CMF C9 H10 O3

CCI IDS

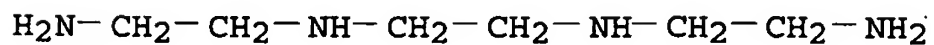


D1-Me

CM 2.

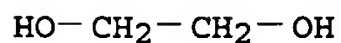
CRN 112-24-3

CMF C6 H18 N4



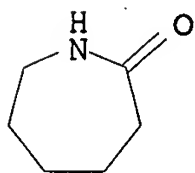
CM 3

CRN 107-21-1  
CMF C2 H6 O2



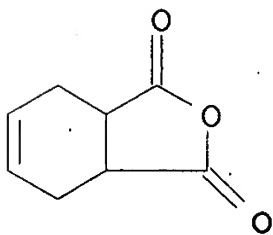
CM 4

CRN 105-60-2  
CMF C6 H11 N O



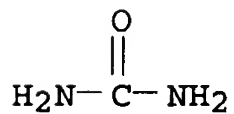
CM 5

CRN 85-43-8  
CMF C8 H8 O3



CM 6

CRN 57-13-6  
CMF C H4 N2 O



L30 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2003:628215 HCAPLUS  
DN 139:181829  
TI Resin compositions for paper coating with good water resistance and ink receptability  
IN Kawamura, Akira; Fukui, Yasuhiro; Hamaguchi, Toshishige  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese

FAN.CNT 2

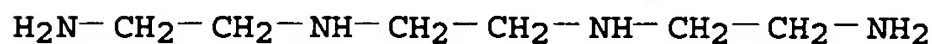
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003227096	A2	20030815	JP 2002-314057	20021029
	JP 3821478	B2	20060913		
	CN 1407040	A	20030402	CN 2002-132250	20020903
PRAI	JP 2001-366245	A	20011130		
	JP 2001-268551	A	20010905		
AB	Title compns. comprise polyamines, alicyclic polycarboxylic acids, ureas, and alkylating agents, where mol ratio of urea/carboxylic acids = >1 and mol ratio of ureas/(moles of primary and secondary amino groups in polyamines - moles of carboxyl groups in alicyclic polycarboxylic acids) = ≤0.8. Thus, HN 2000 458.0, tetrahydrophthalic anhydride 1677.5, and ethylene glycol 427.7 parts were reacted, 1208. 4 parts of the resulting product was reacted with 950.5 parts triethylenetetramine to give 73.6%-solids polyester-polyamide, 190.7 parts of which was reacted with 17.0 parts tetrahydrophthalic anhydride and 16.8 parts epichlorohydrin to give 248.4 parts 70%-solids epichlorohydrin-modified polyester-polyamide, 33.0 parts urea was added therein and reacted to give 53.0%-solids aqueous solution with viscosity 80.0 mPa-s and pH 7.96, 0.6 parts of which was mixed with Ultra White 90 60, Carbital 90 40, Aron T 40 0.2, styrene-butadiene copolymer binder 10, and MS 4600 urea phosphate-modified starch 3 parts, aqueous sodium hydroxide was added therein to give a coating composition with pH 9.1, viscosity 1790 mPa-s, and good water resistance and ink receptability when used for paper coating.				
IC	ICM D21H019-62				
	ICS C08G071-02				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products)				
	Section cross-reference(s): 42				
ST	resin compn paper coating polyester water resistance ink receptability; epichlorohydrin modified polyester polyamide prepn				
IT	Paper				
	(coated; resin compns. for paper coating)				
IT	Polyesters, uses				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-; preparation of resin compns. for paper coating)				
IT	Polyamines				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-; preparation of resin compns. for paper coating)				
IT	Coating materials				
	(resin compns. for paper coating)				
IT	Polyamides, uses				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (resin compns. for paper coating)				
IT	106-89-8DP, Epichlorohydrin, reaction products with polyester-polyamides or polyamides 161081-71-6DP, Tetrahydrophthalic anhydride-triethylenetetramine-urea copolymer, reaction products with epichlorohydrin 528891-52-3DP, reaction products with epichlorohydrin 528891-55-6DP, Ethylene glycol-3-methyltetrahydrophthalic anhydride-4-methyltetrahydrophthalic anhydride-tetrahydrophthalic anhydride-triethylenetetramine-urea copolymer, reaction products with epichlorohydrin				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (resin compns. for paper coating)				

IT 161081-71-6DP, Tetrahydrophthalic anhydride-triethylenetetramine-urea copolymer, reaction products with epichlorohydrin  
 528891-52-3DP, reaction products with epichlorohydrin  
 528891-55-6DP, Ethylene glycol-3-methyltetrahydrophthalic anhydride-4-methyltetrahydrophthalic anhydride-tetrahydrophthalic anhydride-triethylenetetramine-urea copolymer, reaction products with epichlorohydrin  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (resin compns. for paper coating)

RN 161081-71-6 HCAPLUS  
 CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

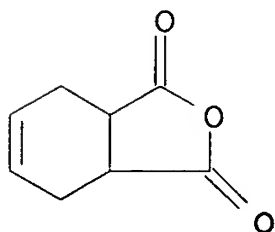
CM 1

CRN 112-24-3  
 CMF C6 H18 N4



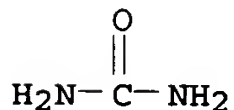
CM 2

CRN 85-43-8  
 CMF C8 H8 O3



CM 3

CRN 57-13-6  
 CMF C H4 N2 O

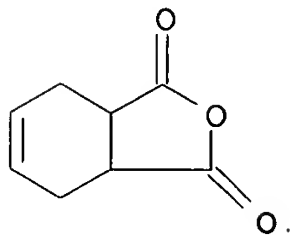


RN 528891-52-3 HCAPLUS  
 CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, 1,2-ethanediol, 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione and 3a,4,7,7a-tetrahydromethyl-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

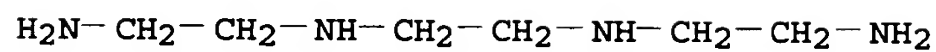
CRN 26590-20-5  
 CMF C9 H10 O3

CCI IDS

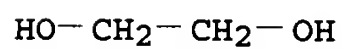


D1-Me

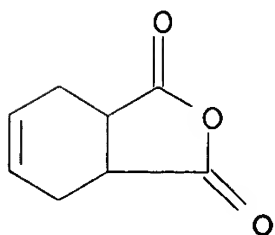
CM 2

CRN 112-24-3  
CMF C6 H18 N4

CM . 3

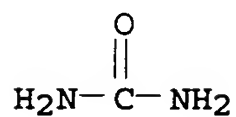
CRN 107-21-1  
CMF C2 H6 O2

CM 4

CRN 85-43-8  
CMF C8 H8 O3

CM 5

CRN 57-13-6  
CMF C H4 N2 O



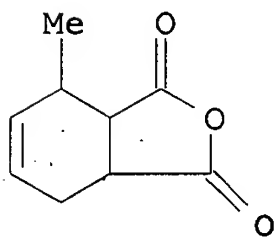
RN 528891-55-6 HCAPLUS

CN Urea, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  
1,2-ethanediol, 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione,  
3a,4,7,7a-tetrahydro-4-methyl-1,3-isobenzofurandione and  
3a,4,7,7a-tetrahydro-5-methyl-1,3-isobenzofurandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 5333-84-6

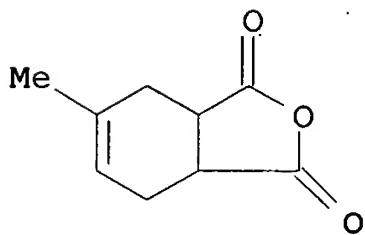
CMF C9 H10 O3



CM 2

CRN 3425-89-6

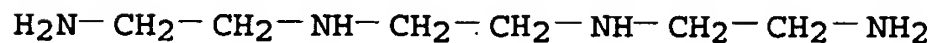
CMF C9 H10 O3



CM 3

CRN 112-24-3

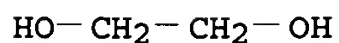
CMF C6 H18 N4



CM 4

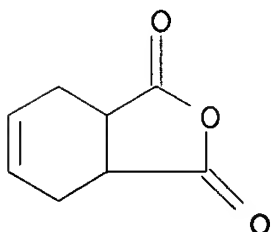
CRN 107-21-1

CMF C2 H6 O2



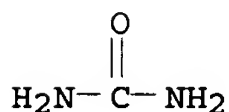
CM 5

CRN 85-43-8  
CMF C8 H8 O3



CM 6

CRN 57-13-6  
CMF C H4 N2 O



L30 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2003:154666 HCAPLUS  
DN 138:206062  
TI Manufacture of artificial leather sheet with good softness and dyeability  
by using morphological impregnating resin material  
IN Kato, Mitsuru; Nakayama, Kimio; Takaoka, Nobuo  
PA Kuraray Co., Ltd., Japan  
SO PCT Int. Appl., 46 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003016613	A1	20030227	WO 2002-JP8290	20020815
	W: CN, KR, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
	JP 2003064584	A2	20030305	JP 2001-250292	20010821
PRAI	JP 2001-250292	A	20010821		
AB	Title disperse dye-dyeable artificial leather sheet is manufactured by impregnating nonwoven fabric (e.g., PET-Nylon 6) with a resin material of the continuous phase having glass transition temperature $T_g \leq 20^\circ$ and the single-layer disperse phase having $T_g \geq 60^\circ$ and diameter $\geq 150$ nm or the multi-layer disperse phase containing $\geq 1$ layer having $T_g \geq 60^\circ$ (the diameter of the outermost of which is $\geq 150$ $\mu\text{m}$ ). Thus, a sheet of nonwoven PET-Nylon 6 fabric was impregnated by a water dispersion of oxazoline (Epocros K				



2010E)-crosslinked acrylic particles (Tg for the continuous phase: -53°; Tg for the disperse phase: 104°), emulsion-polymerized from Me methacrylate, hexanediol diacrylate, Bu acrylate, allyl methacrylate, and methacrylic acid, showing good softness and dyeability.

IC ICM D06N003-00

ICS D06P003-54; D06P003-82; D06P005-00; D06M015-263

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40

ST acrylic impregnating resin morphol nonwoven fabric artificial leather

IT Vinal fibers

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(biconstituent with polyester fibers, islands-in-the-sea, fabrics, nonwoven; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyester fibers, uses

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(fabrics, nonwoven, optionally bicomponent (biconstituent) with alkali-soluble PET or PVA fibers, islands-in-the-sea; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyamide fibers, uses

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(fabrics, nonwoven; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyamides, uses

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(fiber, nonwoven fabrics; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyesters, uses

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(fiber, optionally bicomponent with alkali-soluble PET fiber, fabric, nonwoven; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Impregnating materials

Leather substitutes

Nonwoven fabrics

(manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polycarbonate-polyoxyalkylene-, block, (acrylic), polyamine -, polyurea-, polyester-; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)

IT Polyoxyalkylenes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (polycarbonate-polyurethane-, block, (acrylic), polyamine-, polyurea-, polyester-; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT Polycarbonates, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-polyurethane-, block, (acrylic), polyamine-, polyurea-, polyester-; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 9017-34-9, Ethylene glycol-isophthalic acid-terephthalic acid copolymer, sru 24938-04-3, Ethylene glycol-isophthalic acid-terephthalic acid copolymer  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber, biconstituent with PVA fiber, islands-in-the-sea, fabric, nonwoven; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 25038-54-4, Nylon 6, uses  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber, nonwoven fabrics; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 25038-59-9, Polyethylene terephthalate, uses  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (fiber, optionally bicomponent with alkali-soluble PET fiber, fabric, nonwoven; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 500021-46-5P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (impregnating agent; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 437716-57-9P 500021-47-6P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (impregnating agent; manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 500023-69-8P, Diethylenetriamine-2,2-dimethylolbutanoic acid-hydrazine-isophorone diamine-piperazine-polytetramethylene glycol-2,4-tolylene diisocyanate block copolymer triethylamine salt 500023-71-2P, Butyl acrylate-diethylenetriamine-2,2-dimethylolbutanoic acid-glycidyl methacrylate-hexanediol diacrylate-hydrazine-isophorone diamine-piperazine-polytetramethylene glycol-2,4-tolylene diisocyanate block copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of artificial leather sheet with good softness and dyeability by using morphol. impregnating resin material)
- IT 500023-69-8P, Diethylenetriamine-2,2-dimethylolbutanoic acid-hydrazine-isophorone diamine-piperazine-polytetramethylene glycol-2,4-tolylene diisocyanate block copolymer triethylamine salt 500023-71-2P, Butyl acrylate-diethylenetriamine-2,2-

dimethylolbutanoic acid-glycidyl methacrylate-hexanediol  
diacrylate-hydrazine-isophorone diamine-piperazine-polytetramethylene  
glycol-2,4-tolylene diisocyanate block copolymer triethylamine  
salt

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)

(manufacture of artificial leather sheet with good softness and dyeability  
by using morphol. impregnating resin material)

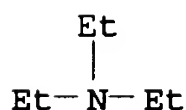
RN 500023-69-8 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with N-(2-aminoethyl)-1,2-  
ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine,  
2,4-diisocyanato-1-methylbenzene, hydrazine,  $\alpha$ -hydro- $\omega$ -  
hydroxypoly(oxy-1,4-butanediyl) and piperazine, block, compd. with  
N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 500023-68-7

CMF (C10 H22 N2 . C9 H6 N2 O2 . C6 H12 O4 . C4 H13 N3 . C4 H10 N2 . (C4  
H8 O)n H2 O . H4 N2)x

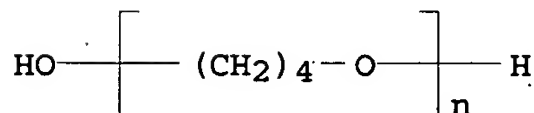
CCI PMS

CM 3

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

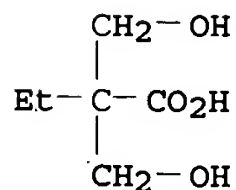
CCI PMS



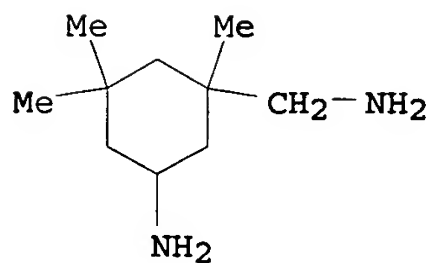
CM 4

CRN 10097-02-6

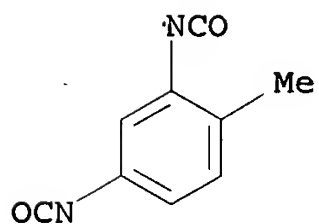
CMF C6 H12 O4



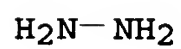
CM 5

CRN 2855-13-2  
CMF C10 H22 N2

CM 6

CRN 584-84-9  
CMF C9 H6 N2 O2

CM 7

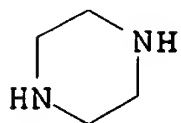
CRN 302-01-2  
CMF H4 N2

CM 8

CRN 111-40-0  
CMF C4 H13 N3

CM 9

CRN 110-85-0  
CMF C4 H10 N2



RN 500023-71-2 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, butyl 2-propenoate, 2,4-diisocyanato-1-methylbenzene, 1,6-hexanediyl di-2-propenoate, hydrazine,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), oxiranylmethyl 2-methyl-2-propenoate and piperazine, block, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 500023-70-1

CMF (C12 H18 O4 . C10 H22 N2 . C9 H6 N2 O2 . C7 H12 O2 . C7 H10 O3 . C6 H12 O4 . C4 H13 N3 . C4 H10 N2 . (C4 H8 O)n H2 O . H4 N2)x

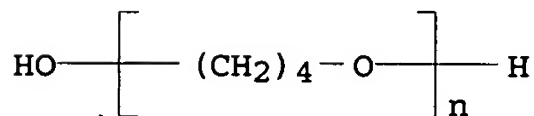
CCI PMS

CM 3

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

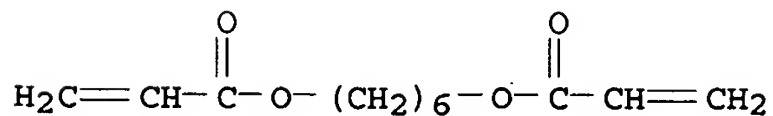
CCI PMS



CM 4

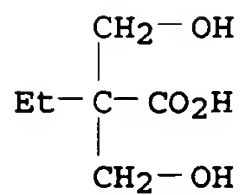
CRN 13048-33-4

CMF C12 H18 O4



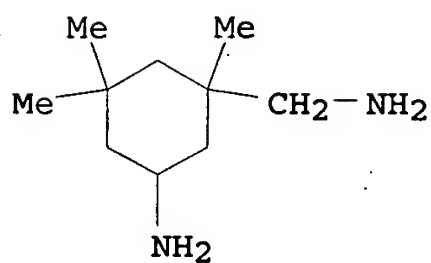
CM 5

CRN 10097-02-6  
CMF C6 H12 O4



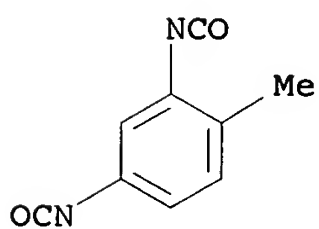
CM 6

CRN 2855-13-2  
CMF C10 H22 N2



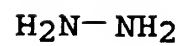
CM 7

CRN 584-84-9  
CMF C9 H6 N2 O2



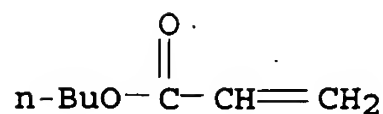
CM 8

CRN 302-01-2  
CMF H4 N2



CM 9

CRN 141-32-2  
CMF C7 H12 O2



CM 10

CRN 111-40-0

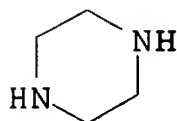
CMF C4 H13 N3



CM 11

CRN 110-85-0

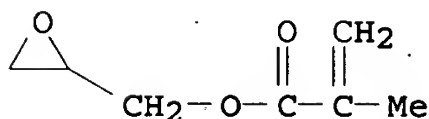
CMF C4 H10 N2



CM 12

CRN 106-91-2

CMF C7 H10 O3



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:110972 HCAPLUS

DN 138:138509

TI Epoxy resin compositions with good pigment dispersibility and storage  
stability and semiconductor devices packaged with them

IN Harada, Tadaaki

PA Nitto Denko Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003040980	A2	20030213	JP 2001-230885	20010731
PRAI	JP 2001-230885		20010731		

AB The compns. contain epoxy resins, curing agents, curing accelerators, and

masterbatches containing curing agents and black titanium oxides. Thus, a composition containing 4,4'-Diglycidyloxydiphenyl ether 174, curing agent mixture of

65% 3,5-dimethyl-2',4,4'-trihydroxybiphenylmethane and 35% 1,5-di(3,5-dimethyl-4-hydroxybenzyl)-2,4-dihydroxybenzene 87, microcapsule comprising PPh3 core and xylylene diisocyanate -trimethylolpropane 3:1 adduct-TDI-trimethylolpropane 1:1 adduct-triethylenetetramine copolymer formic acid salt shell 10, and masterbatch containing a phenolic resin, TiO, and Ti2O3 5.0 parts showed viscosity increase  $\leq 1.5$  times after storage at 25° for 30 days.

- IC ICM C08G059-62
- ICS C08J003-22; C08K003-22; C08L063-00; H01L023-29; H01L023-31
- CC 38-3 (Plastics Fabrication and Uses)
- Section cross-reference(s): 76
- ST epoxy resin titanium oxide electronic packaging; black phenolic epoxy resin semiconductor device; latent curing accelerator microcapsule epoxy resin; storage stability epoxy resin electronic packaging; triphenylphosphine microcapsule epoxy resin elec packaging; polyurethane polyamine triphenylphosphine microcapsule epoxy resin
- IT Pigments, nonbiological  
(black, titanium oxide; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Electronic packaging materials  
Semiconductor devices  
(epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Phenolic resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Microcapsules  
(latent curing accelerators; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Crosslinking catalysts  
(latent, microcapsules; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenolic; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-, curing accelerator microcapsule shells; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT Polyamines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane-, curing accelerator microcapsule shells; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)
- IT 1344-54-3P, Titanium oxide (Ti2O3) 12137-20-1P, Titanium oxide (TiO)  
12143-55-4P, Titanium oxide (Ti4O7) 51890-33-6P, Titanium oxide (Ti3O4)



RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (black pigments; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

IT 147565-68-2 478495-00-0  
RL: RCT (Reactant); RACT (Reactant or reagent) (crosslinking agents; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

IT 186792-01-8DP, amide with formic acid  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (curing accelerator microcapsule shells; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

IT 603-35-0, Triphenylphosphine, uses  
RL: CAT (Catalyst use); USES (Uses) (encapsulated curing accelerators; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

IT 7440-32-6, Titanium, reactions 10049-06-6, Titanium dichloride 13463-67-7, Titanium oxide (TiO<sub>2</sub>), reactions  
RL: RCT (Reactant); RACT (Reactant or reagent) (for manufacture of black titanium oxide pigments; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

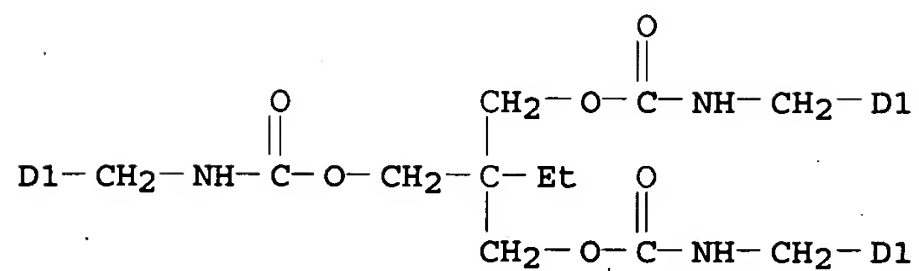
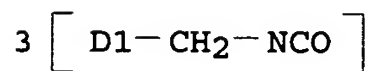
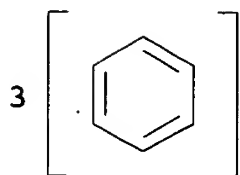
IT 19389-73-2P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (phenolic derivative-crosslinked; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

IT 186792-01-8DP, amide with formic acid  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (curing accelerator microcapsule shells; epoxy resin compns. with good pigment dispersibility and storage stability for electronic packaging semiconductor devices)

RN 186792-01-8 HCAPLUS  
CN Carbamic acid, (3-isocyanatomethylphenyl)-, 2-ethyl-2-[[[(3-isocyanatomethylphenyl)amino]carbonyl]oxy]methyl]-1,3-propanediyl ester, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and 2-ethyl-2-[[[[[(isocyanatomethyl)phenyl]methyl]amino]carbonyl]oxy]methyl]-1,3-propanediyl bis[[[(isocyanatomethyl)phenyl]methyl]carbamate] (9CI) (CA INDEX NAME)

CM 1

CRN 55171-92-1  
CMF C36 H38 N6 O9  
CCI IDS

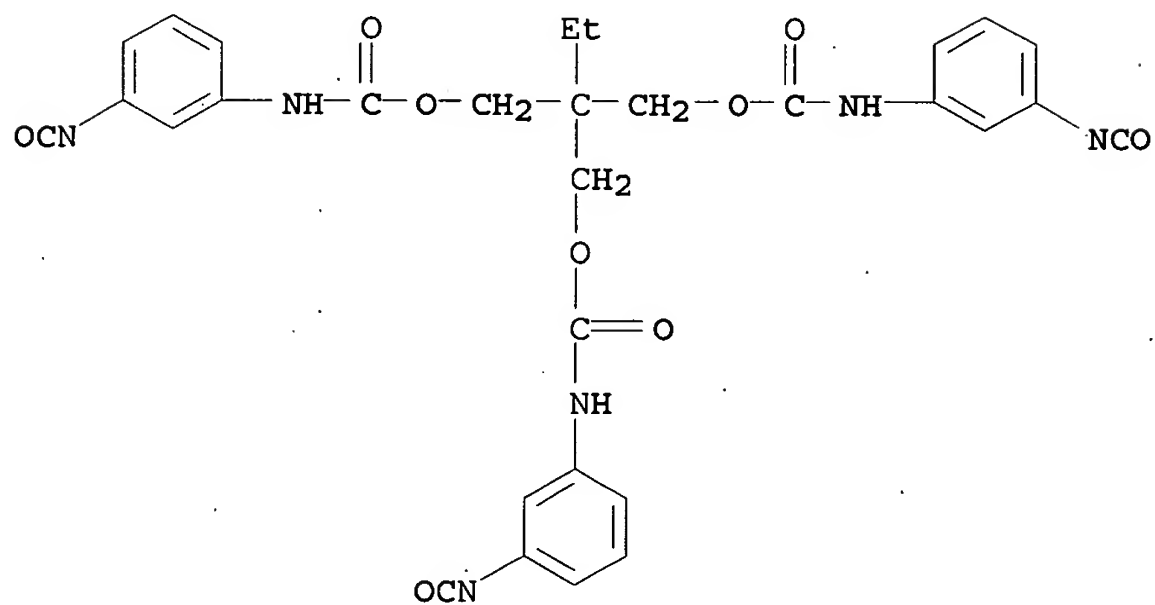


CM 2

CRN 28805-80-3

CMF C33 H32 N6 O9

CCI IDS

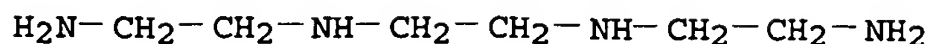


3 ( D1-Me )

CM 3

CRN 112-24-3

CMF C6 H18 N4



L30 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:632820 HCAPLUS

DN 137:171110

TI Polyurethane acrylate epoxy and polyamine composition for fast curing traffic paint

IN Tan, Ling; Naderhoff, Bryan A.; Danneman, Jeffrey H.

PA Reichhold, Inc., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6437059	B1	20020820	US 1999-248890	19990211
	US 2001009952	A1	20010726	US 2001-804367	20010312
	US 6485787	B2	20021126		

PRAI US 1999-248890 A3 19990211

AB A composition suitable for forming a paint marking on a roadway comprises a polyfunctional urethane acrylate having at least two acrylate groups, an epoxy component and a polyfunctional amine. The polyfunctional urethane acrylate reacts with the polyfunctional amine to form an adduct with secondary amine groups. The secondary amine reacts with the epoxy component to yield a chemical crosslinked material having a no track time of less than about ten minutes.

IC ICM B05D001-02

ICS C08L063-02; C08L075-16

INCL 525528000

CC 42-10 (Coatings, Inks, and Related Products)

ST polyurethane acrylate epoxy compn traffic paint; polyamine crosslinking agent paint compn

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy, acrylates; polyurethane acrylate epoxy and polyamine composition for fast curing traffic paint)

IT Roads

(polyurethane acrylate epoxy and polyamine composition for fast curing traffic paint)

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyurethane-, acrylates; polyurethane acrylate epoxy and polyamine composition for fast curing traffic paint)

IT Paints

(traffic-marking, fast curing; polyurethane acrylate epoxy and polyamine composition)

IT 26139-75-3

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Nikanol Y 50; polyurethane acrylate epoxy and polyamine composition for fast curing traffic paint)

IT 446860-55-5P 446860-56-6P 446860-57-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(polyurethane acrylate epoxy and **polyamine** composition for fast curing traffic paint)

IT 13463-67-7, Ti-Pure 902, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(polyurethane acrylate epoxy and **polyamine** composition for fast curing traffic paint)

IT 446860-57-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(polyurethane acrylate epoxy and **polyamine** composition for fast curing traffic paint)

RN 446860-57-7 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,2-cyclohexanediamine, Epotuf 37-058, Epotuf 37-151, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediamine, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 334977-14-9

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 86338-06-9

CMF Unspecified

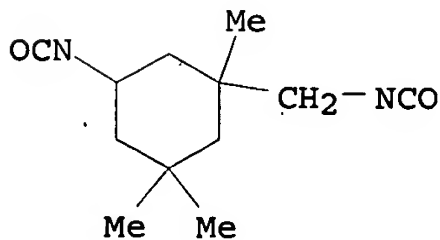
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 4098-71-9

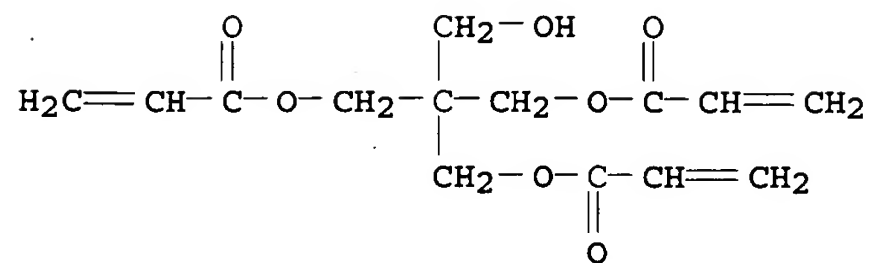
CMF C12 H18 N2 O2



CM 4

CRN 3524-68-3

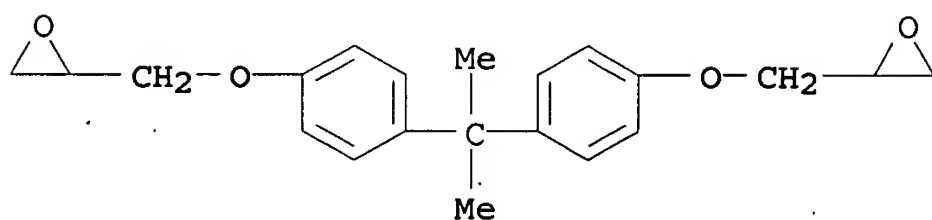
CMF C14 H18 O7



CM 5

CRN 1675-54-3

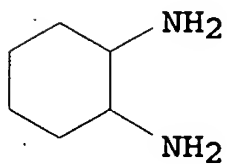
CMF C21 H24 O4



CM 6

CRN 694-83-7

CMF C6 H14 N2



CM 7

CRN 111-40-0

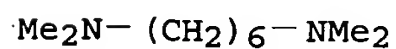
CMF C4 H13 N3



CM 8

CRN 111-18-2

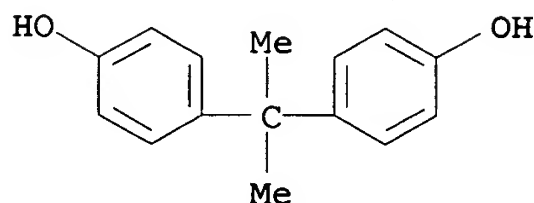
CMF C10 H24 N2



CM 9

CRN 80-05-7

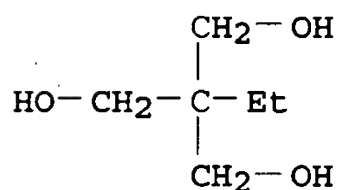
CMF C15 H16 O2



CM 10

CRN 77-99-6

CMF C6 H14 O3



RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L30 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2001:603587 HCAPLUS  
DN 135:168058  
TI Manufacture of water-thinned polyurethanes  
IN Morishima, Takeshi; Kanno, Akira; Sasahara, Toshiaki  
PA Nippon Polyurethane Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001226444	A2	<u>20010821</u>	JP 2000-38181	20000210
PRAI	JP 2000-38181		20000210		

AB The polyurethanes (containing 0.1-1 mmol/g of carboxylate and/or sulfonate groups) are prepared by chain-extension of **isocyanate**-terminated prepolymers (having carboxylate, sulfonate, and/or their acidic group precursors) prepared from organic **isocyanates** and polyols (Mn 62-10,000) with amines [mol. wts. (Mn) 61-500; average number of amino groups

(f)

$2 \leq f < 5$ ] consisting of compds. having  $\geq 3$  primary and/or secondary amino groups and compds. having 1 primary or secondary amino group [ $0.5 \leq$  **isocyanate** group/amino group  $\leq 2$  (by mol)] in H<sub>2</sub>O and/or organic solvents. Thus, a clear coating containing a polyurethane prepared from hydrogenated diphenylmethane **diisocyanate** 128.0, a polyol from 1,6-hexanediol and adipic acid 300, 2,2-methylolbutanoic acid 22.3, triethylamine 15.2, dioctyltin dilaurate 0.04, isophorone diamine 14.4, diethylenetriamine 6.4, and

monoethanolamine 1.1 g showed good water, alkali, and solvent resistance.

IC ICM C08G018-10  
ICS C08G018-32; C08G018-66

CC 42-10 (Coatings, Inks, and Related Products)

ST water thinned polyurethane chem resistant coating; chain extension  
polyisocyanate polyol amine polyurethane

IT Coating materials  
(chemical- and water-resistant; manufacture of water-thinned polyurethanes  
for water- and chemical resistant coatings)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyester-polyurea-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

IT Polyureas  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyester-polyurethane-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurea-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

IT Polyureas  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurethane-; manufacture of  
water-thinned polyurethanes for water- and chemical resistant coatings)

IT Polyesters, uses  
Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyurea-polyurethane-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-polyurea-; manufacture of water-thinned polyurethanes for  
water- and chemical resistant coatings)

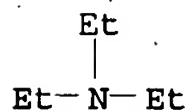
IT Polyureas  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-polyurethane-; manufacture of water-thinned polyurethanes for  
water- and chemical resistant coatings)

IT Polyamines  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyurea-polyurethane-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

IT Polyamines  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-polyurea-polyurethane-; manufacture of water-thinned  
polyurethanes for water- and chemical resistant coatings)

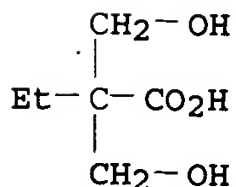
IT Polycarbonates, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polyurea-polyurethane-; manufacture of water-thinned polyurethanes for

water- and chemical resistant coatings)  
 IT Coating materials  
 (solvent-resistant, water-thinned; manufacture of water-thinned  
 polyurethanes for water- and chemical resistant coatings)  
 IT 354556-21-1P 354556-24-4P 354556-27-7P  
 354556-31-3P 354556-34-6P 354556-37-9P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of water-thinned polyurethanes for water- and chemical  
 resistant  
 coatings)  
 IT 354556-21-1P 354556-24-4P 354556-27-7P  
 354556-31-3P 354556-34-6P 354556-37-9P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of water-thinned polyurethanes for water- and chemical  
 resistant  
 coatings)  
 RN 354556-21-1 HCAPLUS  
 CN Hexanedioic acid, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-  
 ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine,  
 2,2-bis(hydroxymethyl)butanoic acid, 1,6-hexanediol and  
 1,1'-methylenebis[4-isocyanatocyclohexane], compd. with  
 N,N-diethylethanamine (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 121-44-8  
 CMF C6 H15 N



CM 2  
 CRN 354556-20-0  
 CMF (C15 H22 N2 O2 . C10 H22 N2 . C6 H14 O2 . C6 H12 O4 . C6 H10 O4 . C4  
 H13 N3 . C2 H7 N O)x  
 CCI PMS

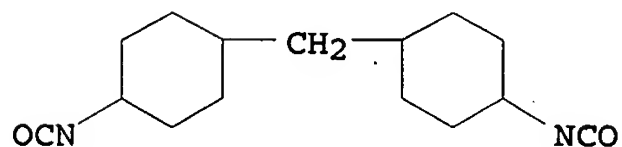
CM 3  
 CRN 10097-02-6  
 CMF C6 H12 O4



CM 4

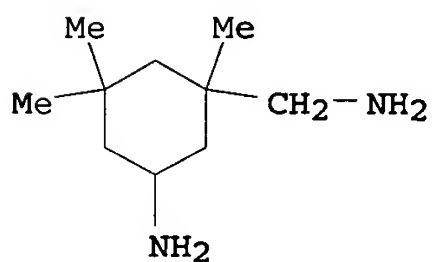


CRN 5124-30-1  
CMF C15 H22 N2 O2



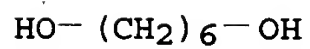
CM 5

CRN 2855-13-2  
CMF C10 H22 N2



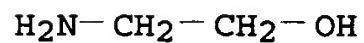
CM 6

CRN 629-11-8  
CMF C6 H14 O2



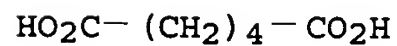
CM 7

CRN 141-43-5  
CMF C2 H7 N O



CM 8

CRN 124-04-9  
CMF C6 H10 O4



CM 9

CRN 111-40-0

CMF C4 H13 N3



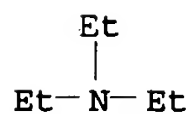
RN 354556-24-4 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, diphenyl carbonate, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 354556-23-3

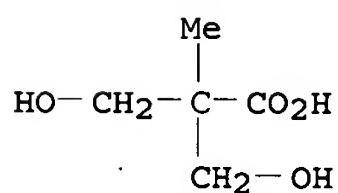
CMF (C13 H10 O3 . C12 H18 N2 O2 . C10 H22 N2 . C6 H14 O2 . C5 H10 O4 . C4 H13 N3 . C2 H7 N O)x

CCI PMS

CM 3

CRN 4767-03-7

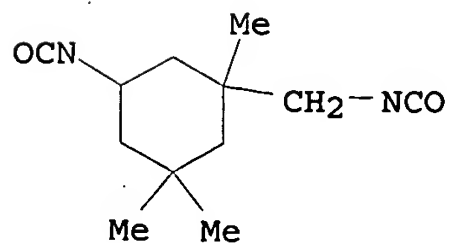
CMF C5 H10 O4



CM 4

CRN 4098-71-9

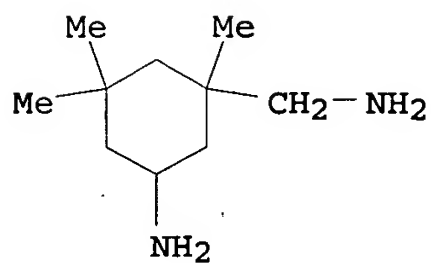
CMF C12 H18 N2 O2



CM 5

CRN 2855-13-2

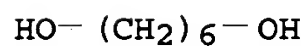
CMF C10 H22 N2



CM 6

CRN 629-11-8

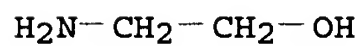
CMF C6 H14 O2



CM 7

CRN 141-43-5

CMF C2 H7 N O



CM 8

CRN 111-40-0

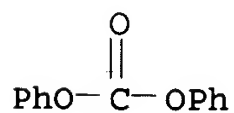
CMF C4 H13 N3



CM 9

CRN 102-09-0

CMF C13 H10 O3

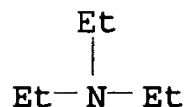


RN 354556-27-7 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-ethanediamine, 2,4-diisocyanato-1-methylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

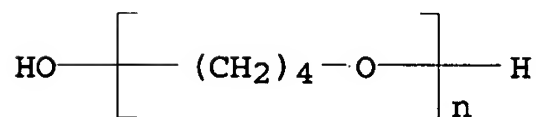


CM 2

CRN 354556-26-6  
CMF (C9 H6 N2 O2 . C6 H12 O4 . C4 H13 N3 . (C4 H8 O)n H2 O . C2 H7 N O)x  
CCI PMS

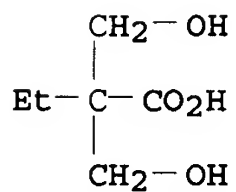
CM 3

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



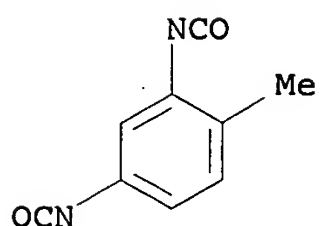
CM 4

CRN 10097-02-6  
CMF C6 H12 O4

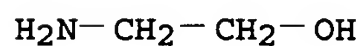


CM 5

CRN 584-84-9  
CMF C9 H6 N2 O2



CM 6

CRN 141-43-5  
CMF C2 H7 N O

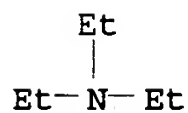
CM 7

CRN 111-40-0  
CMF C4 H13 N3

RN 354556-31-3 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2-aminoethanol,  
N,N'-bis(2-aminoethyl)-1,2-ethanediamine, 2,2-dimethyl-1,3-propanediol,  
1,2-ethanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid,  
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and  
nonanedioic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

CM 2

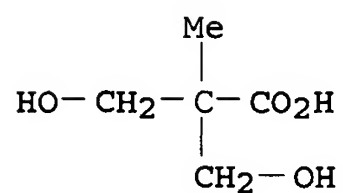
CRN 354556-30-2

CMF (C12 H18 N2 O2 . C9 H16 O4 . C8 H6 O4 . C6 H18 N4 . C5 H12 O2 . C5  
H10 O4 . C2 H7 N O . C2 H6 O2)x

CCI PMS

CM 3

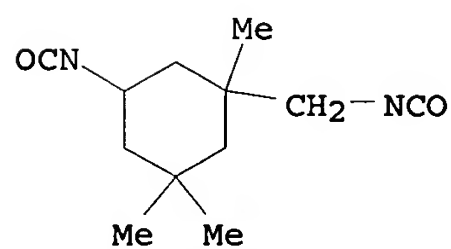
CRN 4767-03-7  
CMF C5 H10 O4



CM 4

CRN 4098-71-9

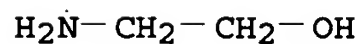
CMF C12 H18 N2 O2



CM 5

CRN 141-43-5

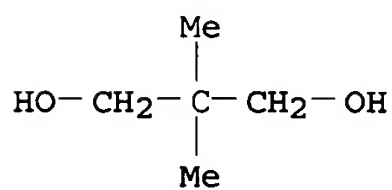
CMF C2 H7 N O



CM 6

CRN 126-30-7

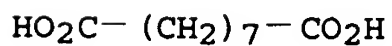
CMF C5 H12 O2



CM 7

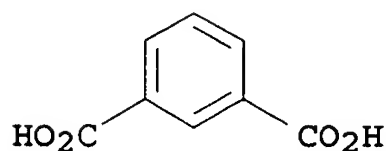
CRN 123-99-9

CMF C9 H16 O4



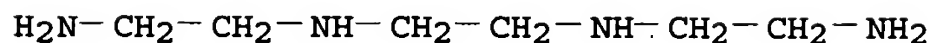
CM 8

CRN 121-91-5  
CMF C8 H6 O4



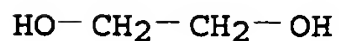
CM 9

CRN 112-24-3  
CMF C6 H18 N4



CM 10

CRN 107-21-1  
CMF C2 H6 O2

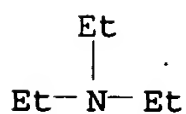


RN 354556-34-6 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-ethanediamine, N,N'-bis(2-aminoethyl)-1,2-ethanediamine, 2,2-dimethyl-1,3-propanediol,  $\alpha,\alpha'$ -1,2-ethanediylbis[ $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)]] and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



CM 2

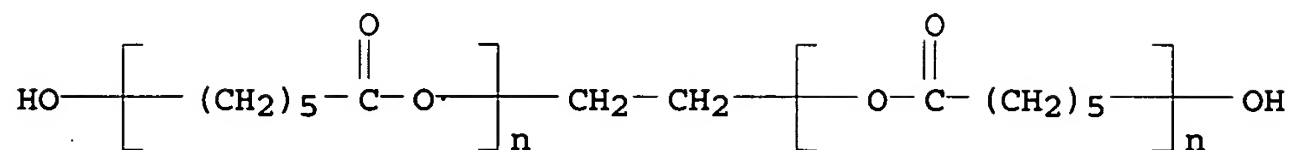
CRN 354556-33-5

CMF (C12 H18 N2 O2 . C6 H18 N4 . C6 H12 O4 . (C6 H10 O2)<sub>n</sub> (C6 H10 O2)<sub>n</sub> C2 H6 O2 . C5 H12 O2 . C4 H13 N3 . C2 H7 N O)<sub>x</sub>

CCI PMS

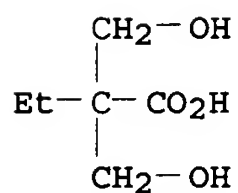
CM 3

CRN 59692-54-5  
CMF (C6 H10 O2)n (C6 H10 O2)n C2 H6 O2  
CCI PMS



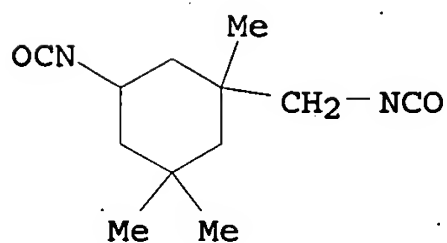
CM. 4

CRN 10097-02-6  
CMF C6 H12 O4



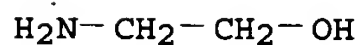
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 6

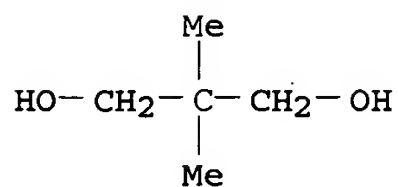
CRN 141-43-5  
CMF C2 H7 N O



CM 7

CRN 126-30-7  
CMF C5 H12 O2

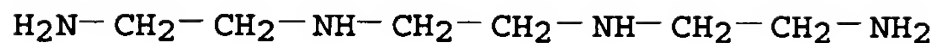




CM 8

CRN 112-24-3

CMF C6 H18 N4



CM 9

CRN 111-40-0

CMF C4 H13 N3



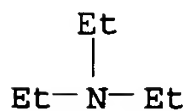
RN 354556-37-9 HCAPLUS

CN Butanoic acid, 2,2-bis(hydroxymethyl)-, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, diphenyl carbonate, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 354556-36-8

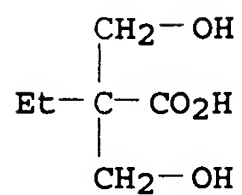
CMF (C13 H10 O3 . C12 H18 N2 O2 . C10 H22 N2 . C6 H14 O2 . C6 H12 O4 . C4 H13 N3 . C2 H7 N O)x

CCI PMS

CM 3

CRN 10097-02-6

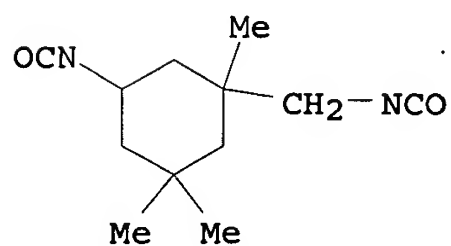
CMF C6 H12 O4



CM 4

CRN 4098-71-9

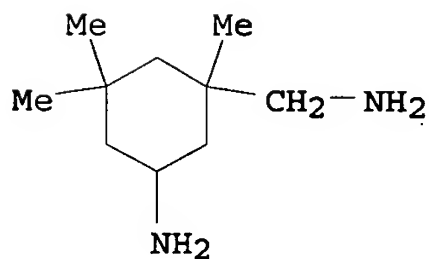
CMF C12 H18 N2 O2



CM 5

CRN 2855-13-2

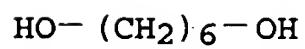
CMF C10 H22 N2



CM 6

CRN 629-11-8

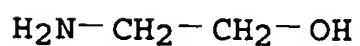
CMF C6 H14 O2



CM 7

CRN 141-43-5

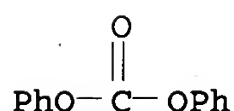
CMF C2 H7 N O



CM 8

CRN 111-40-0  
CMF C4 H13 N3

CM 9

CRN 102-09-0  
CMF C13 H10 O3

L30 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:143697 HCAPLUS

DN 134:180034

TI Water-thinned compositions with good miscibility and solvent-resistant aqueous coatings and those for ink-jet printing paper using the compositions

IN Tanimoto, Seiji

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001055479	A2	20010227	JP 1999-233674	19990820
PRAI	JP 1999-233674		19990820		

AB The coatings for ink-jet printing receptor comprise water-thinned compns. composed of (A) aqueous polyurethane emulsions prepared by reaction of NCO-having urethane prepolymers with primary OH- and/or acetoacetyl-having vinyl alc. polymers and amino- or OH-having low-mol.-weight compds., (B) vinyl alc. polymers, and (C) polyamide-epichlorohydrin resins, epoxy compds., aldehydes, and/or isocyanates as waterproofing agents.

Thus, a composition containing (A) 50 parts polyurethane emulsion [prepared from

urethane prepolymers [obtained by reaction of adipic acid-3-methyl-1,5-pentanediol copolymer diol, IPDI, and 2,2-bis(hydroxymethyl)propionic acid], amino-containing vinyl alc. polymer (obtained by reaction of allyl glycidyl ether-vinyl acetate copolymer with 2-aminothiophenol and saponification),

diethylenetriamine, and isophorone diamine], (B) 100 parts amino-containing vinyl alc. polymer, and (C) 10 parts Epiol E 100 showed good storage stability, and water and solvent resistance when applied on ink-jet printing sheets.

IC ICM C08L029-04

ICS C08L029-04; C08K005-07; C08L063-00; C08L075-04; C08L077-06;  
C09D005-02; C09D007-12; C09D129-04; C09D175-12

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 43

- ST water thinned polyurethane coating miscibility; ink jet printing sheet coating polyurethane emulsion; amino hydroxy vinyl alc polymer polyurethane coating; solvent water resistance coating polyurethane
- IT Coating materials  
(solvent- and water-resistant; water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT Ink-jet recording sheets  
(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT Coating materials  
(water-thinned; water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT 9016-87-9, Coronate C 3053  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(Coronate C 3053; water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT 60-24-2DP, 2-Mercaptoethanol, reaction products with allyl glycidyl ether-vinyl acetate copolymer, polymers with polyols, **polyisocyanates**, and **polyamines** 111-40-0DP, Diethylenetriamine, polymers with vinyl acetate polymers, polyols, **polyisocyanates**, and **polyamines** 124-04-9DP, Adipic acid, polymers with vinyl acetate polymers, polyols, **polyisocyanates**, and **polyamines** 2855-13-2DP, Isophoronediamine, polymers with vinyl acetate polymers, polyols, **polyisocyanates**, and **polyamines** 4098-71-9DP, IPDI, polymers with vinyl acetate polymers, polyols, and **polyamines** 4457-71-0DP, 3-Methyl-1,5-pentanediol, polymers with adipic acid, vinyl acetate polymers, polyols, **polyisocyanates**, and **polyamines** 4767-03-7DP, 2,2-Bis(hydroxymethyl)propionic acid, polymers with vinyl acetate polymers, polyols, **polyisocyanates**, and **polyamines** 31048-51-8DP, Allyl glycidyl ether-vinyl acetate copolymer, reaction products with 2-mercaptoethanol, polymers with polyols, **polyisocyanates**, and **polyamines** 299179-03-6DP, Allyl glycidyl ether-vinyl acetate-2-aminothiophenol copolymer, saponified, polymers with polyols, **polyisocyanates**, and **polyamines** 326603-70-7P, Poly(vinyl alcohol) acetoacetyl ester, polymer with adipic acid, 3-methyl-1,5-pentanediol, IPDI, 2,2-bis(hydroxymethyl)propionic acid and diethylenetriamine  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT 111-30-8, Glutaraldehyde 25212-19-5, WS 535  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)
- IT 9002-89-5D, Poly(vinyl alcohol), amino-, acetoacetyl-, or ethylene-containing  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-thinned compns. with good miscibility and solvent and water

resistance for coatings of ink-jet printing sheets)

IT 29317-04-2, Epiol E 100  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (waterproofing agent; water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

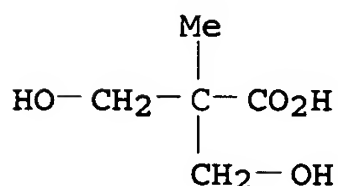
IT 326603-70-7P, Poly(vinyl alcohol) acetoacetyl ester, polymer with adipic acid, 3-methyl-1,5-pentanediol, IPDI, 2,2-bis(hydroxymethyl)propionic acid and diethylenetriamine  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

RN 326603-70-7 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, ethenol homopolymer 3-oxobutanoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

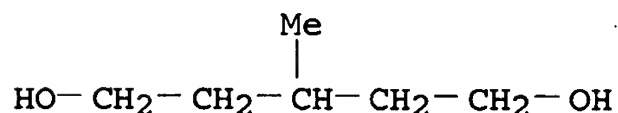
CM 1

CRN 4767-03-7  
 CMF C5 H10 O4



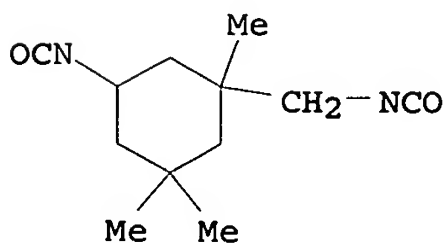
CM 2

CRN 4457-71-0  
 CMF C6 H14 O2



CM 3

CRN 4098-71-9  
 CMF C12 H18 N2 O2



CM 4

CRN 124-04-9  
CMF C6 H10 O4

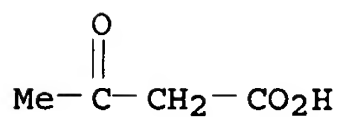
CM 5

CRN 111-40-0  
CMF C4 H13 N3

CM 6

CRN 39290-68-1  
CMF C4 H6 O3 . x (C2 H4 O)x

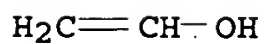
CM 7

CRN 541-50-4  
CMF C4 H6 O3

CM 8

CRN 9002-89-5  
CMF (C2 H4 O)x  
CCI PMS

CM 9

CRN 557-75-5  
CMF C2 H4 O

L30 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:142224 HCAPLUS

DN 134:194786

TI Polyethylenimine-based resins, compositions containing them, and printing paper coated therewith

IN Sakai, Kazuhiro; Iwata, Satoru  
 PA Nippon P.M.C. K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001055690	A2	20010227	JP 1999-228831	19990812
PRAI	JP 1999-228831		19990812		
AB	The resins are manufactured from (A) polyethylenimine, (B) ureas, and optionally (C) polyalkylene-polyamines and/or polyalkylenediamines and (D) alicyclic amines and/or alicyclic carboxylic acids. Thus, a paper sheet coated with an aqueous composition containing polyethylenimine-tetraethylenepentamine-tetrahydrophthalic anhydride-urea copolymer, pigments, binders, and dispersants showed good wet and dry pick strength, ink receptivity, and blister resistance in drying at up to 183°.				
IC	ICM D21H019-62 ICS C09D179-02				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products) Section cross-reference(s): 42				
ST	polyethylenimine urea polyamine polyamide paper coating; printing paper coating polyamine wet pick				
IT	Polyureas RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamide-polyamine-; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Polyamines RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamide-polyurea-; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Polyureas RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Polyamides, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyamine-polyurea-; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Polyamines RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurea-; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Paper (printing, coated; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	Coating materials (water-resistant; polyethylenimine-based resins for printing paper coating with good wet pick strength)				
IT	25035-94-3P, Aziridine, polymer with urea 327968-52-5P 327968-53-6P 327968-54-7P 327968-55-8P RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				

(polyethylenimine-based resins for printing paper coating with good wet pick strength)

IT 327968-52-5P 327968-53-6P 327968-54-7P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyethylenimine-based resins for printing paper coating with good wet pick strength)

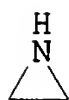
RN 327968-52-5 HCAPLUS

CN Urea, polymer with N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, aziridine and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



CM 2

CRN 112-57-2

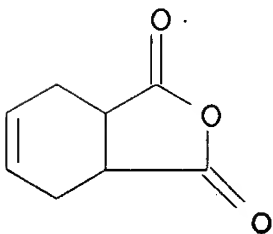
CMF C8 H23 N5



CM 3

CRN 85-43-8

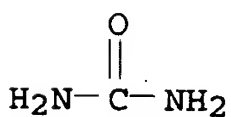
CMF C8 H8 O3



CM 4

CRN 57-13-6

CMF C H4 N2 O





RN 327968-53-6 HCAPLUS

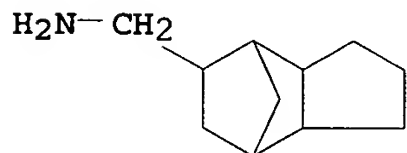
CN Urea, polymer with aziridine, N,N'-bis(2-aminoethyl)-1,2-ethanediamine, octahydro-4,7-methano-1H-indene-5,7-dimethanamine and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 76364-76-6

CMF C12 H22 N2

CCI IDS



D1-CH<sub>2</sub>-NH<sub>2</sub>

CM 2

CRN 151-56-4

CMF C2 H5 N



CM 3

CRN 112-24-3

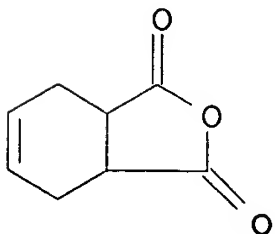
CMF C6 H18 N4

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

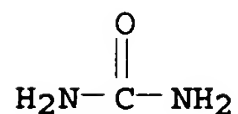
CM 4

CRN 85-43-8

CMF C8 H8 O3



CM 5

CRN 57-13-6  
CMF C H4 N2 O

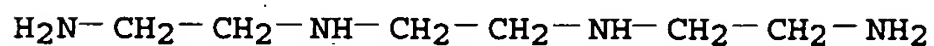
RN 327968-54-7 HCAPLUS

CN Urea, polymer with aziridine, N,N'-bis(2-aminoethyl)-1,2-ethanediamine and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

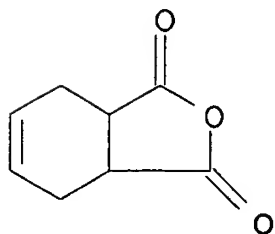
CM 1

CRN 151-56-4  
CMF C2 H5 N

CM 2

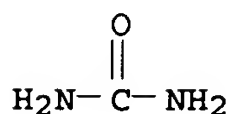
CRN 112-24-3  
CMF C6 H18 N4

CM 3

CRN 85-43-8  
CMF C8 H8 O3

CM 4

CRN 57-13-6  
CMF C H4 N2 O



L30 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:835209 HCAPLUS

DN 134:5511

TI Emulsions of polyurethane-based composite polymers bearing light stabilizing groups

IN Kato, Mitsuru

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000327733	A2	<u>20001128</u>	JP 1999-136330	19990517
PRAI	JP 1999-136330		19990517		

AB The emulsions, manufactured by emulsion polymerization of ethylenically unsatd. monomers in the presence of polyurethane emulsions, have  $\geq 0.1$  mmol (on 100 g polymer) covalently bonded groups selected from hindered amino groups and UV-absorbing groups. Thus, a polyurethane prepolymer was prepared from adipic acid-3-methyl-1,5-pentanediol copolymer, TDI, 2,2-bis(hydroxymethyl)propionic acid, treated with Et<sub>3</sub>N, and polymerized with diethylenetriamine and isophorone diamine to give an emulsion, in the presence of which Bu acrylate, 4-methacryloyloxy-1,2,2,6,6-pentamethylpiperidine, and 1,6-hexanediol diacrylate were polymerized and molded into a film with good yellowing prevention and solvent resistance.

IC ICM C08G018-02

ICS C08F002-44

CC 37-3 (Plastics Manufacture and Processing)

ST polyurethane composite emulsion yellowing prevention; light stability hexanediol acrylate acryloyloxymethylpyridine copolymer; unsatd monomer emulsion polymn polyurethane composite

IT Polymerization

(emulsion, multistage; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

IT Light stabilizers

UV stabilizers

(emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-polycarbonate-polyoxyalkylene-polyurea-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

IT Polyureas

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-polycarbonate-polyoxyalkylene-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

- IT Polyoxyalkylenes, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polycarbonate-polyurea-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyester-polyurea-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polyureas  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyester-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polycarbonates, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyoxyalkylene-polyurea-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyurea-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polyamines  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polycarbonate-polyoxyalkylene-polyurea-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Polyamines  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyester-polyurea-polyurethane-; emulsions of polyurethane-based composite polymers bearing light stabilizing groups)
- IT Solvent-resistant materials  
 (polyurethane-based composite emulsions bearing light stabilizing groups)
- IT 107-15-3DP, Ethylenediamine, polymers with polycaprolactone diol, TDI, bis(hydroxymethyl)propionic acid, and diethylenetriamine, triethylamine salt 111-40-0DP, Diethylenetriamine, polymers with polycaprolactone diol, TDI, bis(hydroxymethyl)propionic acid, and ethylenediamine, triethylamine salt. 121-44-8DP, Triethylamine, reaction products with polycaprolactone diol, TDI, bis(hydroxymethyl)propionic acid, diethylenetriamine, and ethylenediamine 584-84-9DP, 2,4-TDI, polymers with polycaprolactone diol, bis(hydroxymethyl)propionic acid, diethylenetriamine, and ethylenediamine, triethylamine salt 4767-03-7DP, 2,2-Bis(hydroxymethyl)propionic acid, polymers with polycaprolactone diol, TDI, diethylenetriamine, and ethylenediamine, triethylamine salt 24980-41-4DP, Polycaprolactone, diol derivs., polymers with TDI, bis(hydroxymethyl)propionic acid, diethylenetriamine, and ethylenediamine, triethylamine salt 25248-42-4DP, Polycaprolactone, sru, diol derivs.,

polymers with TDI, bis(hydroxymethyl)propionic acid, diethylenetriamine, and ethylenediamine, triethylamine salt 82682-16-4P, Butyl acrylate-1,6-hexanediol diacrylate-methyl methacrylate copolymer 308814-49-5P, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-isophorone diamine-3-methyl-1,5-pentanediol-2,4-tolylene diisocyanate copolymer triethylamine salt 308814-50-8P, Butyl acrylate-1,6-hexanediol diacrylate-4-methacryloyloxy-1,2,2,6,6-pentamethylpiperidine copolymer 308814-51-9P, Allyl methacrylate-butyl acrylate-1,6-hexanediol diacrylate-2-[2-hydroxy-5-(methacryloyloxyethyl)phenyl]-2H-benzotriazole-methyl methacrylate copolymer 308814-52-0P, Allyl methacrylate-butyl acrylate-2-[2-hydroxy-5-(methacryloyloxyethyl)phenyl]-2H-benzotriazole-4-methacryloyloxy-1,2,2,6,6-pentamethylpiperidine-styrene copolymer 308814-53-1P, Allyl methacrylate-butyl acrylate-(diethylamino)ethyl methacrylate-1,6-hexanediol diacrylate-2-[2-hydroxy-5-(methacryloyloxyethyl)phenyl]-2H-benzotriazole-methyl methacrylate-styrene copolymer 308814-55-3P, 2,2-Bis(hydroxymethyl)propionic acid-carbonic acid-diethylenetriamine-1,6-hexanediol-1-(2-hydroxyethyl)-4-hydroxy-2,2,6,6-tetramethylpiperidine-isophorone diamine-polytetramethylene glycol-2,4-tolylene diisocyanate copolymer triethylamine salt 308814-57-5P, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-3-methyl-1,5-pentanediol-N-methyliminobis(propylamine)-2,4-tolylene diisocyanate copolymer triethylamine salt

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

IT 308814-49-5P, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-isophorone diamine-3-methyl-1,5-pentanediol-2,4-tolylene diisocyanate copolymer triethylamine salt 308814-55-3P, 2,2-Bis(hydroxymethyl)propionic acid-carbonic acid-diethylenetriamine-1,6-hexanediol-1-(2-hydroxyethyl)-4-hydroxy-2,2,6,6-tetramethylpiperidine-isophorone diamine-polytetramethylene glycol-2,4-tolylene diisocyanate copolymer triethylamine salt 308814-57-5P, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-3-methyl-1,5-pentanediol-N-methyliminobis(propylamine)-2,4-tolylene diisocyanate copolymer triethylamine salt

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(emulsions of polyurethane-based composite polymers bearing light stabilizing groups)

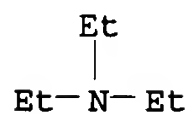
RN 308814-49-5 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, 2,4-diisocyanato-1-methylbenzene, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 308814-48-4

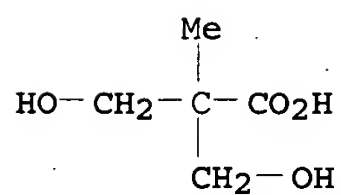
CMF (C10 H22 N2 . C9 H6 N2 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3)x

CCI PMS

CM 3

CRN 4767-03-7

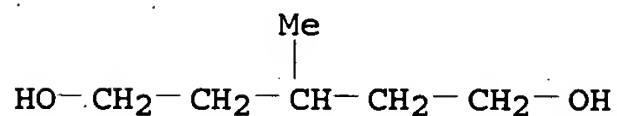
CMF C5 H10 O4



CM 4

CRN 4457-71-0

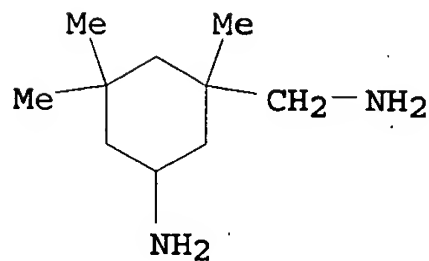
CMF C6 H14 O2



CM 5

CRN 2855-13-2

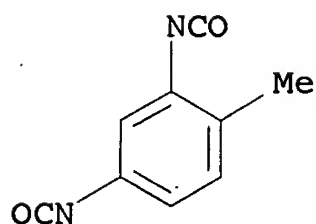
CMF C10 H22 N2



CM 6

CRN 584-84-9

CMF C9 H6 N2 O2



CM 7

CRN 124-04-9  
CMF C6 H10 O4



CM 8

CRN 111-40-0  
CMF C4 H13 N3

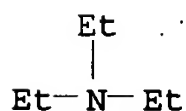


RN 308814-55-3 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, carbonic acid, 2,4-diisocyanato-1-methylbenzene, 1,6-hexanediol,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



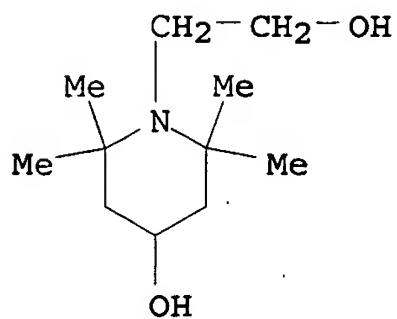
CM 2

CRN 308814-54-2  
CMF (C11 H23 N O2 . C10 H22 N2 . C9 H6 N2 O2 . C6 H14 O2 . C5 H10 O4 . C4 H13 N3 . (C4 H8 O)n H2 O . C H2 O3)x  
CCI PMS

CM 3

CRN 52722-86-8

CMF C11 H23 N O2

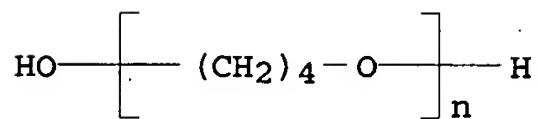


CM 4

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

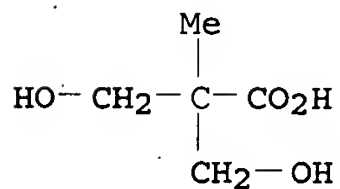
CCI PMS



CM 5

CRN 4767-03-7

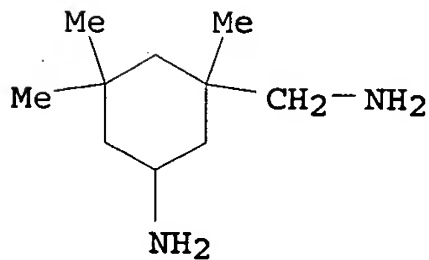
CMF C5 H10 O4



CM 6

CRN 2855-13-2

CMF C10 H22 N2

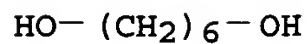


CM 7

CRN 629-11-8



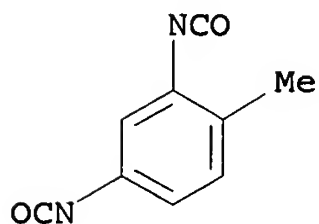
CMF C6 H14 O2



CM 8

CRN 584-84-9

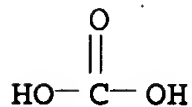
CMF C9 H6 N2 O2



CM 9

CRN 463-79-6

CMF C H2 O3



CM 10

CRN 111-40-0

CMF C4 H13 N3



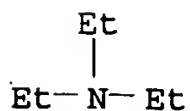
RN 308814-57-5 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, N-(3-aminopropyl)-N-methyl-1,3-propanediamine, 2,4-diisocyanato-1-methylbenzene, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 308814-56-4

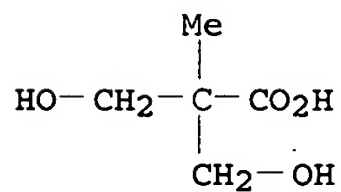
CMF (C9 H6 N2 O2 . C7 H19 N3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3) x

CCI PMS

CM 3

CRN 4767-03-7

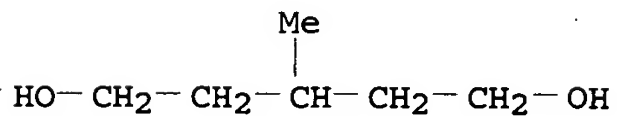
CMF C5 H10 O4



CM 4

CRN 4457-71-0

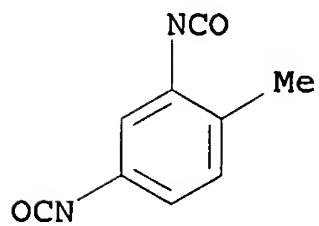
CMF C6 H14 O2



CM 5

CRN 584-84-9

CMF C9 H6 N2 O2



CM 6

CRN 124-04-9

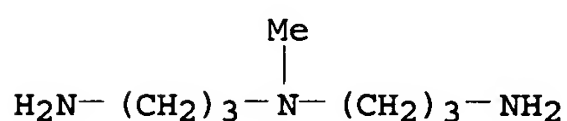
CMF C6 H10 O4



CM 7

CRN 111-40-0  
CMF C4 H13 N3

CM 8

CRN 105-83-9  
CMF C7 H19 N3

L30 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:686296 HCAPLUS

DN 133:267265

TI Water-soluble or water-dispersible polymer salts and their use in cosmetic and pharmaceutical formulations

IN Nguyen, Kim Son; Sanner, Axel; Hossel, Peter

PA BASF Aktiengesellschaft, Germany

SO Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1038891	A2	20000927	EP 2000-106470	20000324
	EP 1038891	A3	20010801		
	EP 1038891	B1	20030122		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19913875	A1	20000928	DE 1999-19913875	19990326
	US 6407158	B1	20020618	US 2000-531469	<u>20000320</u>
	JP 2000302837	A2	20001031	JP 2000-82459	20000323
	AT 231525	E	20030215	AT 2000-106470	20000324
	ES 2191580	T3	20030916	ES 2000-106470	20000324
	CN 1269377	A	20001011	CN 2000-104817	20000327
PRAI	DE 1999-19913875	A	19990326		

AB The salts, especially useful in hair sprays, consist of a polymer with free amino or acid groups and, resp., compds. with  $\geq 2$  acid (or a polybasic inorg. acid) or amino groups, where the latter compound also contains a hydrophilic group. Thus, a polyester diol (from adipic acid, 1,6-hexanediol, and isophthalic acid) 1.0, neopentyl glycol 1.2, dimethylolpropionic acid 2.7, and IPDI 5.0 mol were polymerized to give a carboxy group-containing polyurethane, which was neutralized with N-methyldipropylenetriamine.

IC ICM C08F220-00

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 62, 63

ST polyurethane salt hair spray formulation

- IT Amines, preparation  
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (N-tallow alkylpropylenediamines, ethoxylated, compound with carboxy-containing block polyester-polyurethane or polyacrylate; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Cosmetics  
 (creams; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polysiloxanes, properties  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (polyamine-polyoxyalkylene-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyoxyalkylenes, properties  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (polyamine-polysiloxane-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyurethanes, preparation  
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyester-, block, carboxy-containing, salts with polyamines; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyurethanes, preparation  
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-, block, amino-containing, salts with polybasic acids; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polysiloxanes, properties  
 Polysiloxanes, properties  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (polyoxyalkylene-, graft, amino group-containing; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyamines  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (polyoxyalkylene-polysiloxane-, block; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Polyoxyalkylenes, properties  
 Polyoxyalkylenes, properties  
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (polysiloxane-, graft, amino group-containing; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Hair preparations  
 (sprays; water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)
- IT Coating materials  
 (water-soluble or water-dispersible polymer salts for use in)
- IT Cosmetics

## Drugs

## Shampoos

(water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

IT 154838-98-9DP, Butyl acrylate-tert-butyl acrylate-methacrylic acid copolymer, compound with Dinoramox S 7 292621-96-6DP, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-IPDI-isophthalic acid-neopentyl glycol block copolymer, compound with Dinoramox S 7 297168-78-6P, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-IPDI-isophthalic acid-neopentyl glycol block copolymer N-methyldipropylenetriamine salt 297168-79-7P 297168-81-1P 297168-82-2P 297168-83-3P, Butyl acrylate-tert-butyl acrylate-methacrylic acid copolymer N-methyldipropylenetriamine salt 297168-84-4P 297168-85-5P 297168-86-6P 297168-88-8P 297168-90-2P  
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)

(water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

IT 297168-78-6P, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-IPDI-isophthalic acid-neopentyl glycol block copolymer N-methyldipropylenetriamine salt  
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)

(water-soluble or water-dispersible polymer salts for use in cosmetic and pharmaceutical formulations)

RN 297168-78-6 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, block, compd. with N-(2-aminomethylethyl)-1,2-propanediamine N-methyl deriv. (9CI) (CA INDEX NAME)

CM 1

CRN 11071-12-8

CMF C7 H19 N3

CCI IDS



3 ( D1-Me )

CM 2

CRN 292621-96-6

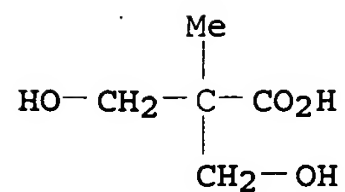
CMF (C12 H18 N2 O2 . C8 H6 O4 . C6 H14 O2 . C6 H10 O4 . C5 H12 O2 . C5 H10 O4)x

CCI PMS

CM 3

CRN 4767-03-7

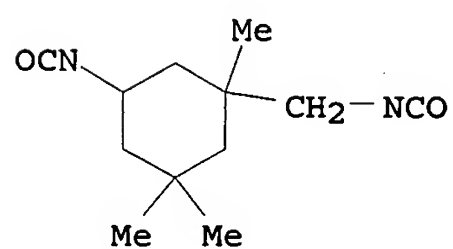
CMF C5 H10 O4



CM 4

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 5

CRN 629-11-8

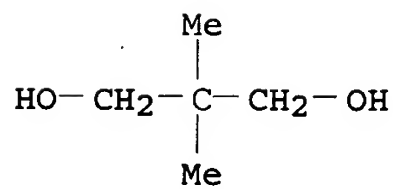
CMF C6 H14 O2



CM 6

CRN 126-30-7

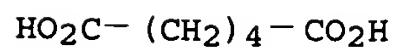
CMF C5 H12 O2



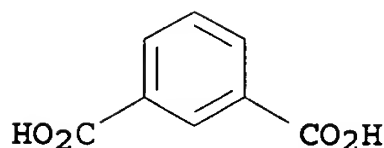
CM 7

CRN 124-04-9

CMF C6 H10 O4



CM 8

CRN 121-91-5  
CMF C8 H6 O4

L30 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:579997 HCAPLUS

DN 133:164739

TI Manufacture of aqueous polyurethane emulsions with excellent water and solvent resistance

IN Tanimoto, Seiji; Fujiwara, Naoki

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000230033	A2	20000822	JP 1999-34100	19990212
PRAI	JP 1999-34100		19990212		

AB The emulsions, useful for coatings, adhesives, artificial leathers, are manufactured by reaction of **isocyanate**-containing polyurethane prepolymers, amine-type polymers, and active H-containing low-mol.-weight compds.

(selected from primary and secondary amine and OH groups) in aqueous media. Thus, a prepolymer [prepared from adipic acid-3-methyl-1,5-pentanediol copolymer 537.5, isophorone diisocyanate (I) 111.1, 2,2-bis(hydroxymethyl)propionic acid 6.71, and triethylamine 5.06 g] was emulsified with Emulgen 985 (nonionic surfactant) and treated with poly(N-vinylacetamide), 7.58 g diethylenetriamine, and 12.52 g I to give an emulsion (40% solid) showing good miscibility with OM 4200 (EVA emulsion). A film manufactured from the emulsion showed good resistance to PhMe and H<sub>2</sub>O.

IC ICM C08G018-65

ICS C08L039-02

CC 37-3 (Plastics Manufacture and Processing)

ST water solvent resistance aq polyurethane emulsion; polyester polyurethane prepolymer polyvinylacetamide emulsion; polyvinylamine polyurethane ethylamine salt miscibility EVA

IT Solvent-resistant materials

Water-resistant materials

(manufacture of aqueous polyurethane emulsions containing hydrolyzed amine polymers

with good water and solvent resistance)

IT Polymer blends

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(manufacture of aqueous polyurethane emulsions containing hydrolyzed amine polymers

with good water and solvent resistance)

IT Surfactants

(nonionic; manufacture of aqueous polyurethane emulsions containing hydrolyzed amine

polymers with good water and solvent resistance)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-; manufacture of aqueous polyurethane emulsions containing hydrolyzed

amine polymers with good water and solvent resistance)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-polyoxyalkylene-; manufacture of aqueous polyurethane emulsions containing hydrolyzed amine polymers with good water and solvent resistance)

IT 24937-78-8, OM 4200

RL: POF (Polymer in formulation); USES (Uses)

(emulsions miscible with; manufacture of aqueous polyurethane emulsions containing

hydrolyzed amine polymers with good water and solvent resistance)

IT 111-40-ODP, Diethylenetriamine, polymers with polyoxyalkylene, polyester polyol, and HMDI, triethylamine salts 121-44-8DP, Triethylamine, reaction products with polyester-polyoxyalkylene-polyurethanes 822-06-ODP, HMDI, polymers with polyoxyalkylene, polyester polyol, dimethylolpropionic acid, and **polyamines**, triethylamine salts 4098-71-9DP, Isophorone **diisocyanate**, polymers with polyoxyalkylene, polyester polyol, and HMDI, triethylamine salts 4767-03-7DP, 2,2-Bis(hydroxymethyl)propionic acid, polymers with polyoxyalkylene, polyester polyol, HMDI, and **polyamines**, triethylamine salts 25190-06-1DP, Polytetramethylene glycol, polymers with polyester polyol, HMDI, dimethylolpropionic acid, and **polyamines**, triethylamine salts 25248-42-4DP, Polycaprolactone, sru, diol derivs., polymers with polyoxyalkylene, HMDI, dimethylolpropionic acid, and **polyamines**, triethylamine salts 28408-65-3DP, Poly(N-vinylacetamide), hydrolyzed 30551-89-4P, Polyallylamine 72018-12-3DP, Poly(N-vinylformamide), hydrolyzed **288087-03-6P**, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-isophorone diamine-isophorone **diisocyanate** -3-methyl-1,5-pentanediol copolymer triethylamine salt **288087-04-7P**, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-isophorone **diisocyanate** -3-methyl-1,5-pentanediol copolymer triethylamine salt **288087-06-9P**, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-ethylenediamine-3-methyl-1,5-pentanediol-TDI copolymer triethylamine salt

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(manufacture of aqueous polyurethane emulsions containing hydrolyzed amine polymers

with good water and solvent resistance)

IT 9016-45-9, Emulgen 985

RL: NUU (Other use, unclassified); USES (Uses)

(nonionic surfactant; manufacture of aqueous polyurethane emulsions containing

hydrolyzed amine polymers with good water and solvent resistance)

IT **288087-03-6P**, Adipic acid-2,2-bis(hydroxymethyl)propionic acid-diethylenetriamine-isophorone diamine-isophorone **diisocyanate**



-3-methyl-1,5-pentanediol copolymer triethylamine salt  
 288087-04-7P, Adipic acid-2,2-bis(hydroxymethyl)propionic  
 acid-diethylenetriamine-isophorone diisocyanate  
 -3-methyl-1,5-pentanediol copolymer triethylamine salt  
 288087-06-9P, Adipic acid-2,2-bis(hydroxymethyl)propionic  
 acid-diethylenetriamine-ethylenediamine-3-methyl-1,5-pentanediol-TDI  
 copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)

(manufacture of aqueous polyurethane emulsions containing hydrolyzed amine  
 polymers.

with good water and solvent resistance)

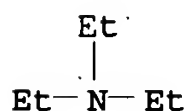
RN 288087-03-6 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
 5-amino-1,3,3-trimethylcyclohexanemethanamine, 3-hydroxy-2-(hydroxymethyl)-  
 2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with  
 N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 288087-02-5

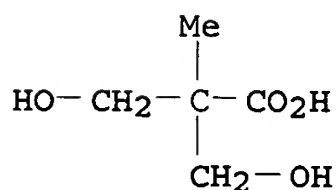
CMF (C12 H18 N2 O2 . C10 H22 N2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4  
 H13 N3)x

CCI PMS

CM 3

CRN 4767-03-7

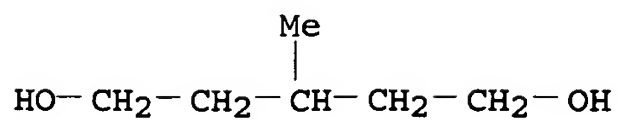
CMF C5 H10 O4



CM 4

CRN 4457-71-0

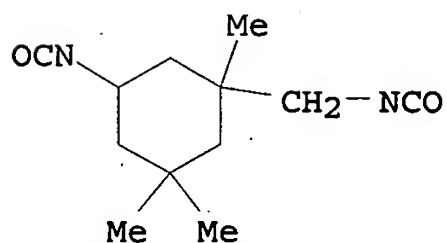
CMF C6 H14 O2



CM 5

CRN 4098-71-9

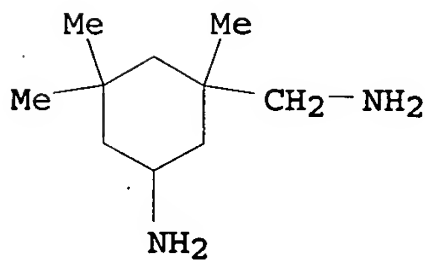
CMF C12 H18 N2 O2



CM 6

CRN 2855-13-2

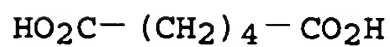
CMF C10 H22 N2



CM 7

CRN 124-04-9

CMF C6 H10 O4



CM 8

CRN 111-40-0

CMF C4 H13 N3



RN 288087-04-7 HCAPLUS

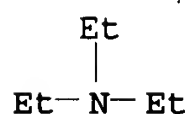
CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine,

3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 242792-43-4

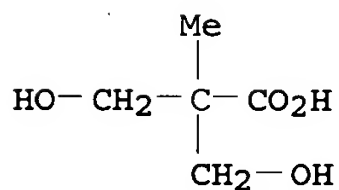
CMF (C12 H18 N2 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3)x

CCI PMS

CM 3

CRN 4767-03-7

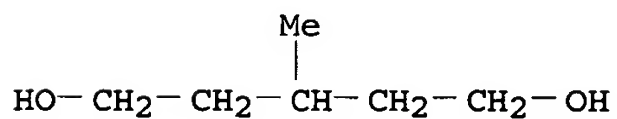
CMF C5 H10 O4



CM 4

CRN 4457-71-0

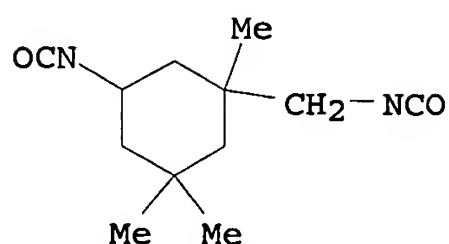
CMF C6 H14 O2



CM 5

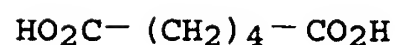
CRN 4098-71-9

CMF C12 H18 N2 O2



CM 6

CRN 124-04-9  
CMF C6 H10 O4



CM 7

CRN 111-40-0  
CMF C4 H13 N3

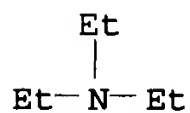


RN 288087-06-9 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,3-diisocyanatomethylbenzene, 1,2-ethanediamine, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 3-methyl-1,5-pentanediol, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



CM 2

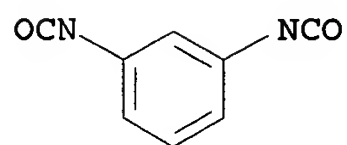
CRN 288087-05-8

CMF (C9 H6 N2 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3 . C2 H8 N2) x

CCI PMS

CM 3

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

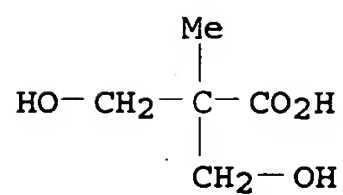


D1-Me

CM 4

CRN 4767-03-7

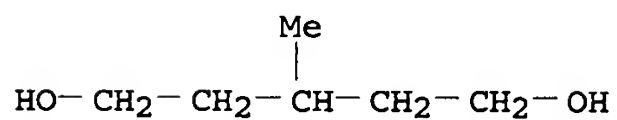
CMF C5 H10 O4



CM 5

CRN 4457-71-0

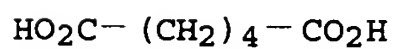
CMF C6 H14 O2



CM 6

CRN 124-04-9

CMF C6 H10 O4



CM 7

CRN 111-40-0

CMF C4 H13 N3



CM 8

CRN 107-15-3  
CMF C2 H8 N2

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

L30 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:553257 HCAPLUS

DN 133:152047

TI Anticorrosive cationic electrodeposition coating compositions without containing lead compounds

IN Kamikado, Koji; Nishida, Reiziro

PA Kansai Paint Co., Ltd., Japan

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1026188	A2	<u>20000809</u>	EP 2000-102476	20000204
	EP 1026188	A3	20010822		
	EP 1026188	B1	20030625		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2298134	AA	20000805	CA 2000-2298134	20000204
	US 2002177674	A1	20021128	US 2002-145697	20020516
	US 6777504	B2	20040817		
	US 2003004282	A1	20030102	US 2002-187803	20020703
	US 6762252	B2	20040713		
PRAI	JP 1999-28722	A	19990205		
	US 2000-497731	A3	20000204		

AB The composition comprises (A) a modified epoxy resin obtained by first reacting a diepoxide compound selected from a bisphenol A bis(polyalkylene glycol glycidyl ether) ether [e.g., bis(polypropylene glycol glycidyl ether) ether] and a polyoxyalkylene glycidyl ether (e.g., polypropylene oxide diglycidyl ether), with a bisphenol A-based epoxy resin with epoxy equivalent 170-500 (e.g., bisphenol A glycidyl ether) and a bisphenol to give an epoxy resin; reacting the epoxy resin with a cyclic ester (e.g., ε-caprolactone); and further reacting with an amine compound having active hydrogen (e.g., diethanolamine); and (B) a crosslinking agent (e.g., blocked isophorone diisocyanate).

IC ICM C08G059-06

ICS C08G059-42; C08G059-50; C08G059-14; C09D163-00; C09D005-00

CC 42-7 (Coatings, Inks, and Related Products)

ST cationic electrodeposition coating prepn corrosion resistant; epoxy polyoxyalkylene polyester polyurethane electrodeposition coating

IT Crosslinking agents

Electrodeposits

(anticorrosive cationic electrodeposition coating compns. containing modified epoxy-polyamine without containing lead compds.)

IT Coating materials

(anticorrosive; anticorrosive cationic electrodeposition coating compns. containing modified epoxy-polyamine without containing lead compds.)

IT Polyurethanes, uses

Polyurethanes, uses

- Polyurethanes, uses  
Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyester-polyether-; anticorrosive cationic electrodeposition  
coating compns. containing modified epoxy-polyamine without  
containing lead compds.)
- IT Polyethers, uses  
Polyethers, uses  
Polyethers, uses  
Polyethers, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyester-polyurethane-; anticorrosive cationic  
electrodeposition coating compns. containing modified epoxy-  
polyamine without containing lead compds.)
- IT Polyesters, uses  
Polyesters, uses  
Polyesters, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyether-polyurethane-; anticorrosive cationic  
electrodeposition coating compns. containing modified epoxy-  
polyamine without containing lead compds.)
- IT Epoxy resins, uses  
Epoxy resins, uses  
Epoxy resins, uses  
Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyether-polyurethane-; anticorrosive cationic  
electrodeposition coating compns. containing modified epoxy-  
polyamine without containing lead compds.)
- IT 287385-64-2P, Bisphenol A-bisphenol A diglycidyl  
ether-bis(polypropylene glycol glycidyl ether) ether-ε-  
caprolactone-diethanolamine-diethylenetriamine-TDI copolymer  
287385-65-3P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(anticorrosive cationic electrodeposition coating compns. containing  
modified epoxy-polyamine without containing lead compds.)
- IT 26471-62-5D, TDI, partially blocked with 2-Ethylhexanol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(anticorrosive cationic electrodeposition coating compns. containing  
modified epoxy-polyamine without containing lead compds.)
- IT 68083-48-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinking agent; anticorrosive cationic electrodeposition coating  
compns. containing modified epoxy-polyamine without containing lead  
compds.)
- IT 104-76-7D, 2-Ethylhexanol, TDI partially blocked with  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of blocked isocyanates)
- IT 287385-64-2P, Bisphenol A-bisphenol A diglycidyl  
ether-bis(polypropylene glycol glycidyl ether) ether-ε-  
caprolactone-diethanolamine-diethylenetriamine-TDI copolymer  
287385-65-3P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM

(Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(anticorrosive cationic electrodeposition coating compns. containing  
modified epoxy-polyamine without containing lead compds.)

RN 287385-64-2 HCAPLUS

CN 2-Oxepanone, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
1,3-diisocyanatomethylbenzene, 2,2'-iminobis[ethanol],  
4,4'-(1-methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-  
phenyleneoxymethylene)]bis[oxirane] and  $\alpha,\alpha'$ -[(1-  
methylethylidene)di-4,1-phenylene]bis[ $\omega$ -  
(oxiranylmethoxy)poly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

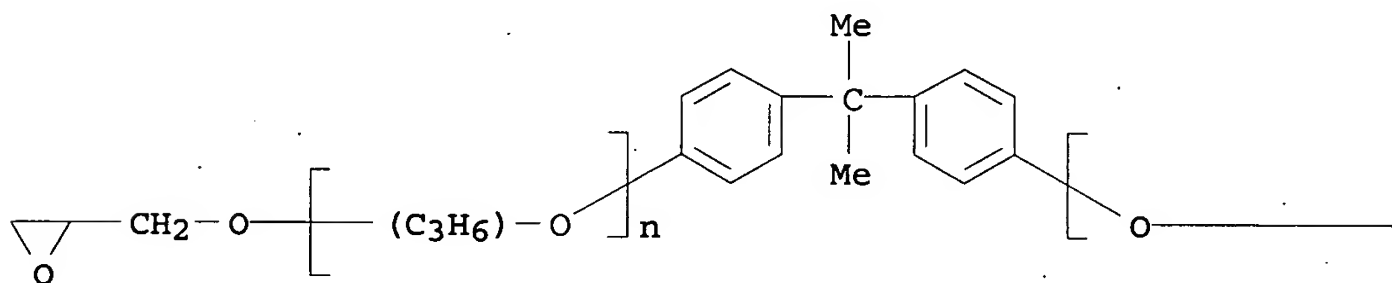
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CRN 55236-42-5

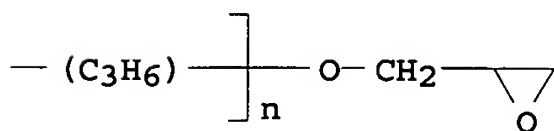
CMF (C3 H6 O)n (C3 H6 O)n C21 H24 O4

CCI IDS, PMS

PAGE 1-A



PAGE 1-B

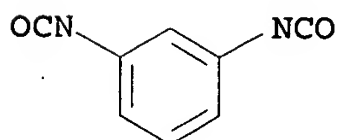


CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

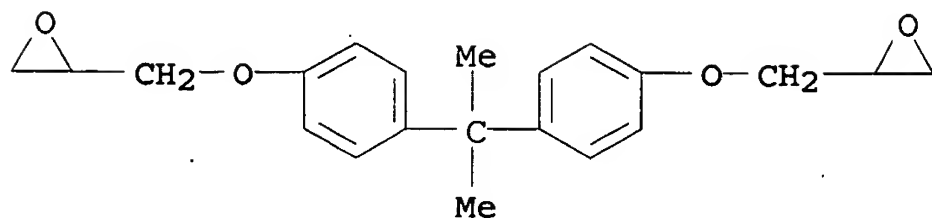
CCI IDS



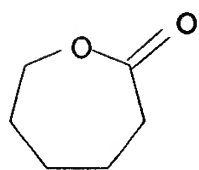
D1-Me



CM 3

CRN 1675-54-3  
CMF C21 H24 O4

CM 4

CRN 502-44-3  
CMF C6 H10 O2

CM 5

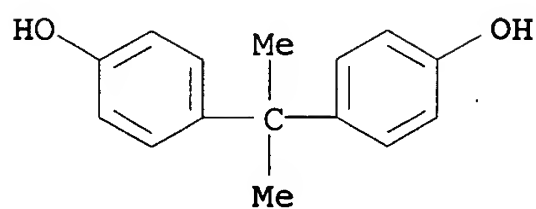
CRN 111-42-2  
CMF C4 H11 N O2

CM 6

CRN 111-40-0  
CMF C4 H13 N3

CM 7

CRN 80-05-7  
CMF C15 H16 O2

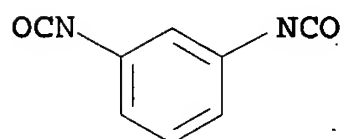


RN 287385-65-3 HCAPLUS

CN 2-Oxepanone, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
1,3-diisocyanatomethylbenzene, 2,2'-iminobis[ethanol],  
4,4'-(1-methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-  
phenyleneoxymethylene)]bis[oxirane] and  $\alpha$ -(oxiranylmethyl)- $\omega$ -  
(oxiranylmethoxy)poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

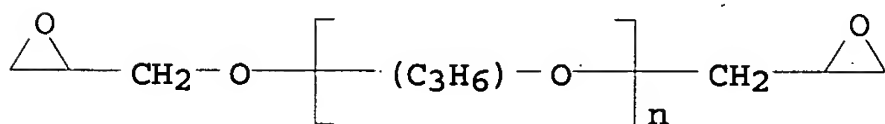
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1- Me

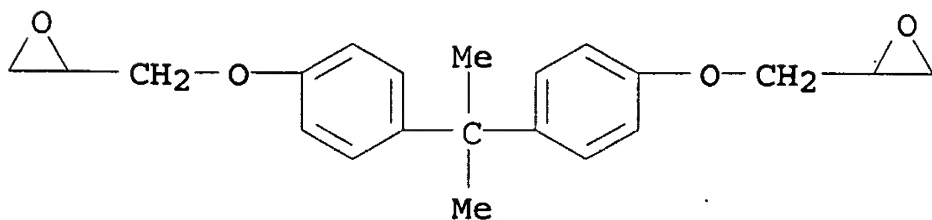
CM . 2

CRN 26142-30-3  
CMF (C3 H6 O)n C6 H10 O3  
CCI IDS, PMS

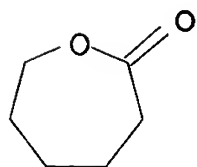


CM 3

CRN 1675-54-3  
CMF C21 H24 O4



CM 4

CRN 502-44-3  
CMF C6 H10 O2

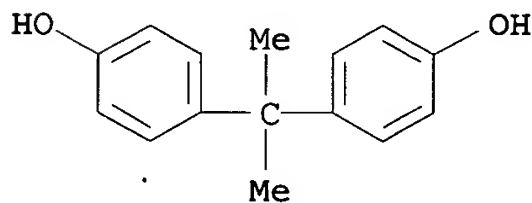
CM 5

CRN 111-42-2  
CMF C4 H11 N O2

CM 6

CRN 111-40-0  
CMF C4 H13 N3

CM 7

CRN 80-05-7  
CMF C15 H16 O2

L30 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2000:493129 HCAPLUS  
DN 133:121738  
TI Binders for soft-feel lacquers  
IN Schafheutle, Markus; Gerlitz, Martin; Arzt, Anton; Burkl, Julius; Wango, Jorg; Glettler, Martina  
PA Vianova Resins A.-G., Austria; Surface Specialties Austria GmbH  
SO Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW  
DT Patent  
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1020482	A1	20000719	EP 2000-100394	20000108
	EP 1020482	B1	20040818		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 9900054	A	20020215	AT 1999-54	19990118
	AT 409633	B	20020925		
	AT 274005	E	20040915	AT 2000-100394	20000108
	ES 2226615	T3	20050401	ES 2000-100394	20000108
	JP 2000212515	A2	20000802	JP 2000-6878	20000114
	US 6211286	B1	20010403	US 2000-483592	20000114
PRAI	AT 1999-54	A	19990118		
	EP 2000-100394	A	20000108		
AB	Binder compns. that exhibit short curing times and provide lacquer films with long-lasting soft-feel contain (A) predominately aliphatic, water-thinnable polymers having cyclic carbonate side or terminal groups and (B) polyamines, with the ration of (B) to carbonate groups in (A) being (3-7):(3-7). A typical (A) was manufactured by polymerizing diethylene glycol				
	32.2, ethylene glycol 16.42, and adipic acid 72, adding 476 g HDI to NMP containing intermediate polyester 2064, dimethylolpropionic acid 150, and 1,6-hexanediol 22 g in 30 min at 60°, heating at 60° until the NCO content is 1.6%, adding 143 g 4-hydroxymethyl-1,3-dioxolan-2-one in 10 min at 60°, heating at 60° until the NCO content is 0, and neutralizing with Et3N.				
IC	ICM C08G018-08				
	ICS C08G018-12; C09D175-06				
CC	42-10 (Coatings, Inks, and Related Products)				
	Section cross-reference(s): 37				
ST	soft feel waterborne lacquer polyamine cured cyclic carbonate polymer; hydroxymethyldioxolanone terminated polyester polyurethane waterborne lacquer; HDI polyester polyurethane cyclic carbonate terminated waterborne lacquer; hexanediol polyester polyurethane cyclic carbonate terminated waterborne lacquer; adipic acid polyester polyurethane cyclic carbonate terminated waterborne lacquer; ethylene glycol polyester polyurethane cyclic carbonate terminated waterborne lacquer; diethylene glycol polyester polyurethane cyclic carbonate terminated waterborne lacquer; polyester polyurethane cyclic carbonate terminated manuf waterborne lacquer				
IT	Polyurethanes, preparation				
	Polyurethanes, preparation				
	Polyurethanes, preparation				
	RL: IMF (Industrial manufacture); PREP (Preparation)				
	(polyamine-polyester-, block; binders based on				
	polyamine-cured polymers having cyclic carbonate side or				
	terminal groups for soft-feel lacquers)				
IT	Polyesters, preparation				
	Polyesters, preparation				
	Polyesters, preparation				
	RL: IMF (Industrial manufacture); PREP (Preparation)				
	(polyamine-polyurethane-, block; binders based on				
	polyamine-cured polymers having cyclic carbonate side or				
	terminal groups for soft-feel lacquers)				
IT	Polyurethanes, uses				
	Polyurethanes, uses				
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(polybutadiene-polyester-, cured coating; binders based on				

- polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**
- IT Polyesters, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polybutadiene-polyurethane-, cured coating; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, acrylic, cured coating; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, cured coating; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT **Polyamines**  
**Polyamines**  
**Polyamines**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyester-polyurethane-, block; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT Coating materials  
(water-thinned; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT 25214-18-0P, Adipic acid-diethylene glycol-ethylene glycol copolymer  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(binder component precursor; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT 64-18-6DP, Formic acid, salts with cyclic carbonate-terminated **polyamine-polyester-polyurethanes**, preparation 931-40-8DP, 4-Hydroxymethyl-1,3-dioxolan-2-one, reaction products with NCO-terminated polyester-polyurethanes, salts 256521-75-2DP, reaction products with hydroxymethyldioxolanone, dimethylethanolamine salt 284033-48-3DP, reaction products with hydroxymethyldioxolanone, triethylamine salt 284033-49-4DP, reaction products with hydroxymethyldioxolanone, formic acid salt 284033-54-1DP, reaction products with hydroxymethyldioxolanone, triethylamine salt 284033-56-3DP, reaction products with hydroxymethyldioxolanone, dimethylethanolamine salt  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
(binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT 284033-51-8P 284033-53-0P 284033-58-5P  
284033-60-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(cured coating; binders based on **polyamine-cured polymers having cyclic carbonate side or terminal groups for soft-feel lacquers)**)
- IT 284033-51-8P 284033-53-0P 284033-58-5P  
284033-60-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
 (cured coating; binders based on polyamine-cured polymers  
 having cyclic carbonate side or terminal groups for soft-feel lacquers)

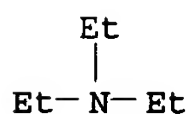
RN 284033-51-8 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
 1,6-diisocyanatohexane, 1,2-ethanediol, 1,6-hexanediol,  
 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 4-(hydroxymethyl)-1,3-  
 dioxolan-2-one and 2,2'-oxybis[ethanol], compd. with N,N-diethylethanamine  
 (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 284033-50-7

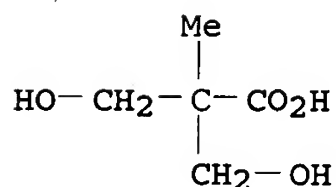
CMF (C8 H12 N2 O2 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H13 N3 . C4  
 H10 O3 . C4 H6 O4 . C2 H6 O2)x

CCI PMS

CM 3

CRN 4767-03-7

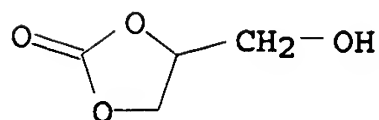
CMF C5 H10 O4



CM 4

CRN 931-40-8

CMF C4 H6 O4



CM 5

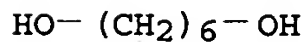
CRN 822-06-0

CMF C8 H12 N2 O2



CM 6

CRN 629-11-8  
CMF C6 H14 O2



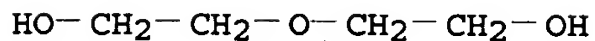
CM 7

CRN 124-04-9  
CMF C6 H10 O4



CM 8

CRN 111-46-6  
CMF C4 H10 O3



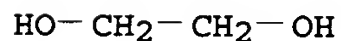
CM 9

CRN 111-40-0  
CMF C4 H13 N3



CM 10

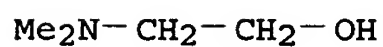
CRN 107-21-1  
CMF C2 H6 O2



RN 284033-53-0 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,6-diisocyanatohexane, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 4-(hydroxymethyl)-1,3-dioxolan-2-one and 2,2'-oxybis[ethanol], compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

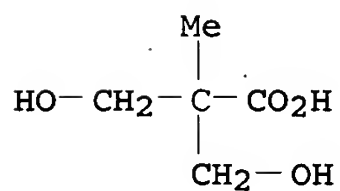
CM 1

CRN 108-01-0  
CMF C4 H11 N O

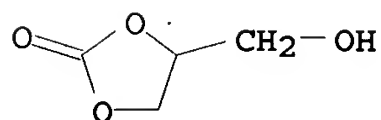
CM 2

CRN 284033-52-9  
CMF (C8 H12 N2 O2 . C6 H14 O3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4  
H13 N3 . C4 H10 O3 . C4 H6 O4 . C2 H6 O2)x  
CCI PMS

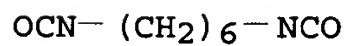
CM 3

CRN 4767-03-7  
CMF C5 H10 O4

CM 4

CRN 931-40-8  
CMF C4 H6 O4

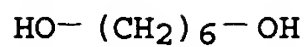
CM 5

CRN 822-06-0  
CMF C8 H12 N2 O2

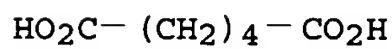
CM 6

CRN 629-11-8  
CMF C6 H14 O2

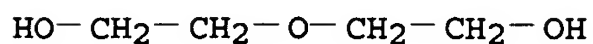




CM 7

CRN 124-04-9  
CMF C6 H10 O4

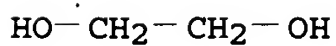
CM 8

CRN 111-46-6  
CMF C4 H10 O3

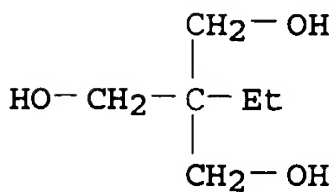
CM 9

CRN 111-40-0  
CMF C4 H13 N3

CM 10

CRN 107-21-1  
CMF C2 H6 O2

CM 11

CRN 77-99-6  
CMF C6 H14 O3

RN 284033-58-5 HCAPLUS

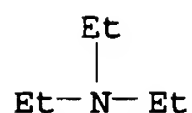
CN Hexanedioic acid, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  
1,3-butadiene, 1,6-diisocyanatohexane, 1,2-ethanediol, 1,6-hexanediol,

3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and  
2,2'-oxybis[ethanol], compd. with N,N-diethylethanamine (9CI) (CA INDEX  
NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 284033-57-4

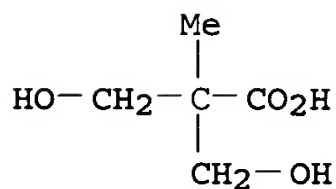
CMF (C8 H12 N2 O2 . C6 H18 N4 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4  
H10 O3 . C4 H6 . C2 H6 O2)x

CCI PMS

CM 3

CRN 4767-03-7

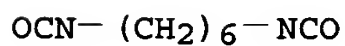
CMF C5 H10 O4



CM 4

CRN 822-06-0

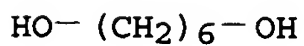
CMF C8 H12 N2 O2



CM 5

CRN 629-11-8

CMF C6 H14 O2



CM 6

CRN 124-04-9

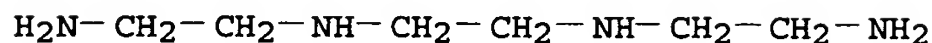
CMF C6 H10 O4



CM 7

CRN 112-24-3

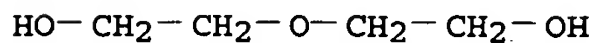
CMF C6 H18 N4



CM 8

CRN 111-46-6

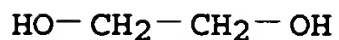
CMF C4 H10 O3



CM 9

CRN 107-21-1

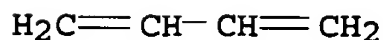
CMF C2 H6 O2



CM 10

CRN 106-99-0

CMF C4 H6



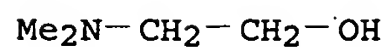
RN 284033-60-9 HCAPLUS

CN Hexanedioic acid, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, butyl 2-methyl-2-propenoate, 1,6-diisocyanatohexane, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 2,2'-oxybis[ethanol], compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0

CMF C4 H11 N O



CM 2

CRN 284033-59-6

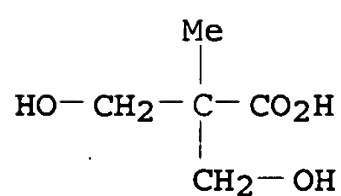
CMF (C8 H14 O2 . C8 H12 N2 O2 . C6 H18 N4 . C6 H14 O3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H10 O3 . C2 H6 O2)x

CCI PMS

CM 3

CRN 4767-03-7

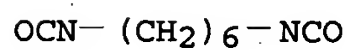
CMF C5 H10 O4



CM 4

CRN 822-06-0

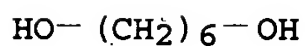
CMF C8 H12 N2 O2



CM 5

CRN 629-11-8

CMF C6 H14 O2



CM 6

CRN 124-04-9

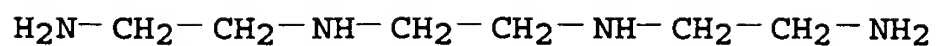
CMF C6 H10 O4



CM 7

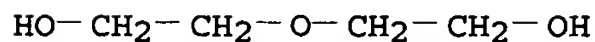
CRN 112-24-3

CMF C6 H18 N4



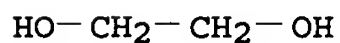
CM 8

CRN 111-46-6  
CMF C4 H10 O3



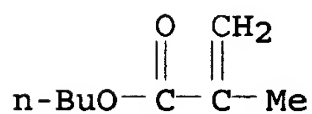
CM 9

CRN 107-21-1  
CMF C2 H6 O2



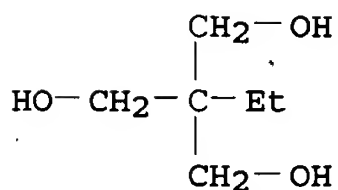
CM 10

CRN 97-88-1  
CMF C8 H14 O2



CM 11

CRN 77-99-6  
CMF C6 H14 O3



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2000:381706 HCAPLUS  
DN 133:18870  
TI High abrasion resistant coating material containing silane-functionalized organic compound.  
IN Wilkes, Garth L.; Wen, Jianye; Jordens, Kurt Joseph  
PA Virginia Tech Intellectual Properties, Inc., USA

SO U.S., 10 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 6072018	A	20000606	US 1997-882101	19970625
PRAI	US 1996-27408P	P	19960930		

AB A composition for polymeric or metallic substrate comprises  $\geq 1$  metal alkoxide and a silane-functionalized organic compound (I), wherein (I) is an isocyanate, a di or triamine, an aliphatic diol, an aromatic diol or a triol. Thus, a coating was prepared from triethoxysilane-functionalized diethylenetriamine 100 ( prepared from diethylenetriamine 1, 2-propanol 6.2, and isocyanatopropyltriethoxysilane 3.15 mols), 2-propanol 50, tetramethoxysilane 70, HCl 12.5 parts, coated on to an Al substrate and cured at 185°.

IC ICM C08G018-04  
 ICS C08G077-18

INCL 528028000

CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 63

ST silane functional metal alkoxide abrasion resistant coating; ethoxysilane ethylenetriamine propanol aluminum coating; polymer metal substrate abrasion resistant coating

IT Eyeglass lenses  
 Sol-gel processing  
 UV stabilizers

(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Metals, miscellaneous  
 Polymers, miscellaneous  
 RL: MSC (Miscellaneous)

(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Coating materials  
 (abrasion-resistant; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Silanes  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (alkoxy, hydrolytic polymers; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (aralkyl, silane-functional; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Ligands  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (ethylacetoacetate; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT Metal alkoxides  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (hydrolytic polymers; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Polymerization  
(hydrolytic; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Polyamines  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyalkylene-, reaction products with isocyanates; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyhydric, silane-functional; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Polymerization  
(radical; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Isocyanates  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reaction products with polyalkylene polyamines; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT Glycols, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(silane-functional; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT 96478-09-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(UV stabilizer; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT 56-18-8DP, 3,3'-Iminobispropylamine, reaction product with isocyanatopropyltriethoxysilane 111-40-0DP, Diethylenetriamine, reaction product with isocyanatopropyltriethoxysilane 24801-88-5DP, reaction product with diethylene triamine  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT 183374-61-0P 183374-62-1P 272440-64-9P 272440-65-0P 272440-66-1P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)
- IT 272440-63-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT 25037-45-0, Bisphenol A-carbonic acid copolymer

RL: MSC (Miscellaneous)

(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT 141-97-9, Ethylacetoacetate

RL: MOA (Modifier or additive use); USES (Uses)

(ligand; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT 24936-68-3, Lexan, miscellaneous

RL: MSC (Miscellaneous)

(substrate, Lexan; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT 7429-90-5, Aluminum, miscellaneous 25656-90-0, CR-39 151768-82-0, Lexan MR 5

RL: MSC (Miscellaneous)

(substrate; abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

IT 272440-66-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(abrasion resistant coating materials for polymeric or metallic substrates containing silane-functionalized organic compound and metal alkoxide)

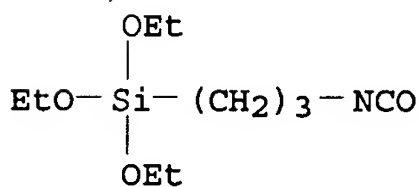
RN 272440-66-1 HCAPLUS

CN Butanoic acid, 3-oxo-, ethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 2-butanol aluminum salt, silicic acid (H<sub>4</sub>SiO<sub>4</sub>) tetramethyl ester and triethoxy(3-isocyanatopropyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 24801-88-5

CMF C10 H21 N O4 Si

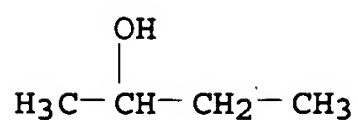


CM 2

CRN 2269-22-9

CMF C4 H10 O . 1/3 Al



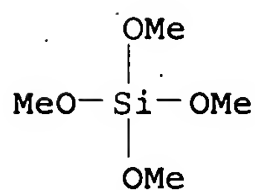


● 1/3 Al

CM 3

CRN 681-84-5

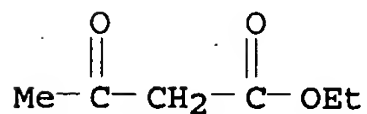
CMF C4 H12 O4 Si



CM 4

CRN 141-97-9

CMF C6 H10 O3



CM 5

CRN 111-40-0

CMF C4 H13 N3



RE.CNT 18      THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1998:488320 HCAPLUS  
DN 129:190636  
TI Formaldehyde-free resins for improving the printability of paper and paper  
coating compositions containing them  
IN Narishima, Mayumi; Mori, Hideo  
PA Nippon PMC K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10195799	A2	19980728	JP 1996-345940	19961225
PRAI	JP 1996-345940		19961225		
AB	The coating compns. are obtained from ordinary binders, pigments and the reaction products of (a) amine compds., (b) carbocyclic epoxy compds., (c) urea compds. or/and (d) carboxylic acid compds. provided that the molar ratio of the carbocyclic moiety to the amine groups is at 0.01-0.8:1 and the amine number is at 80-600 for improving the good balance of ink receptivity and wet pick strength of coated paper using them. Thus, heating diethylenetriamine 2 with urea 2 in water at 110-120° for 3 h, adding water, cooling to 50°, adding dropwise styrene oxide 2 mol to the resulting deammoniated mixture at 80° for 3 h and adjusting to pH 9 with H2SO4 gave a resin with amine number 227. A latex paper coating was formulated from Ultra White 90 60, FMT 90 40, JSR-T2076M 11, MS-4600 4, Aron T-40 0.1 and the resin 0.5 part.				
IC	ICM D21H019-24				
	ICS C09D163-00; C09D175-02				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products)				
	Section cross-reference(s): 42				
ST	pick strength improver resin paper coating; ink receptivity coating improver resin; printing paper printability improver resin coating; polyalkylene polyamine epoxy reaction coating improver; styrene oxide polyamine reaction coating improver				
IT	Coating materials (formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)				
IT	Kaolin, uses RL: MOA (Modifier or additive use); USES (Uses) (pigments; formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)				
IT	Paper (printing; formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)				
IT	11120-02-8P, MS-4600 211688-29-8P, JSR-T 2076M RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (binders; formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)				
IT	65-85-0DP, Benzoic acid, reaction products with <b>polyamine</b> carbocyclic epoxy compound and ureas, uses 79-09-4DP, Propionic acid, reaction products with <b>polyamine</b> -carbocyclic epoxy compound and ureas 106-70-7DP, Methyl hexanoate, reaction products with <b>polyamine</b> -carbocyclic epoxy compound and ureas 211361-05-6DP, Diethylenetriamine-styrene oxide-urea copolymer, reaction products with benzoic acid 211361-05-6P, Diethylenetriamine-styrene oxide-urea copolymer 211361-06-7P, Diethylenetriamine-isophorone diamine-styrene oxide-urea copolymer 211361-07-8P, Diethylenetriamine-styrene oxide-urea-m-xylylenediamine copolymer 211361-08-9P, Diethylenetriamine-styrene oxide-tetrahydrophthalic anhydride-urea copolymer 211361-09-0P, 1,4-Cyclohexanedimethanol-diethylenetriamine-urea copolymer 211361-10-3DP, Diethylenetriamine-phenyl glycidyl ether-urea copolymer, reaction products with Me hexanoate or propionic acid 211361-10-3P, Diethylenetriamine-phenyl glycidyl ether-urea copolymer 211361-11-4P, Diethylenetriamine-ethylenediamine-phenyl glycidyl ether-urea copolymer 211361-12-5P, Adipic acid-diethylenetriamine-styrene oxide copolymer 211361-13-6P, Diethylenetriamine-maleic anhydride-styrene oxide copolymer				

211361-14-7P, Diethylenetriamine-maleic anhydride-styrene oxide-urea copolymer

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)

(formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)

IT 471-34-1, FMT 90, uses

RL: MOA (Modifier or additive use); USES (Uses)

(pigments; formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)

IT 211361-08-9P, Diethylenetriamine-styrene oxide-tetrahydrophthalic anhydride-urea copolymer

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)

(formaldehyde-free resins for improving printability of paper and paper coating compns. containing them)

RN 211361-08-9 HCAPLUS

CN Urea, polymer with N-(2-aminoethyl)-1,2-ethanediamine, phenyloxirane and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

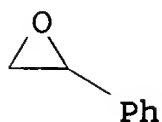
CMF C4 H13 N3



CM 2

CRN 96-09-3

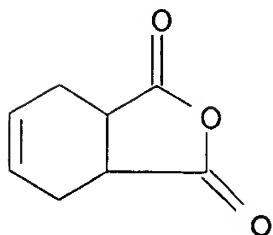
CMF C8 H8 O



CM 3

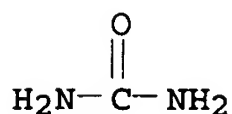
CRN 85-43-8

CMF C8 H8 O3



CM 4

CRN 57-13-6  
CMF C H4 N2 O



L30 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:505351 HCAPLUS

DN 127:136852

TI Membrane materials having good resistance to soiling and fire and their manufacture

IN Takeda, Masanobu; Hayakawa, Toshihiro; Seki, Masao

PA Toray Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09183188	A2	19970715	JP 1995-344131	19951228
PRAI	JP 1995-344131		19951228		

AB Title materials are manufactured by (1) addition of mixture solns. of cationic polyurethanes and blocked **polyisocyanates** and/or water repellents on surfaces of fabrics, (2) heat treatment at  $\geq 120^\circ$ , and (3) coating or hot-pressing thermoplastic resins on one or both sides of fabrics. Thus, a polyester fabric was dipped in a mixture of 100 parts a cationic polyurethane (prepared from ethylene glycol, 1,4-butanediol, adipic acid, 2,4-TDI, 2,6-TDI, diethylenetriamine, epichlorohydrin, and glycolic acid aqueous solns.) and 5 parts a blocked **isocyanate** aqueous dispersion, squeezed, dried at  $130^\circ$ , heated at  $190^\circ$  for 1 min, and hot-pressed with a coating containing Evatate CV 2097 (EVA) at  $180^\circ$  to give a test piece showing adhesion strength 6.1 kg/3 cm (to the fabric; JIS K 6328), good water absorption and fire resistance.

IC ICM B32B027-12

ICS E04H015-54

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40, 42

ST membrane cationic polyurethane blocked **isocyanate** fabric; fire resistance membrane thermoplastic resin coating; water repellent polyurethane fabric membrane; polyurethane polyurea polyamine blocked **isocyanate** membrane

IT Fireproofing agents

Fireproofing agents

(coatings; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Polyester fibers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(fabrics, substrates; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Coating process

Membranes, nonbiological

Water-resistant materials

(fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Laminated plastics, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Polyurethanes, uses  
 Polyurethanes, uses  
 Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyurea-; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Polyureas  
 Polyureas  
 Polyureas  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyurethane-; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT Polyamines  
 Polyamines  
 Polyamines  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyurea-polyurethane-; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT 54112-23-1DP, reaction products with polyurea-polyurethane-**polyamines** 124784-27-6DP, reaction products with polyurea-polyurethane-**polyamines** 193154-66-4DP, reaction products with blocked **isocyanate** 193154-67-5DP, reaction products with blocked **isocyanate**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT 42610-70-8, Asahiguard AG 710  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (water repellents; fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

IT 193154-66-4DP, reaction products with blocked **isocyanate**  
 193154-67-5DP, reaction products with blocked **isocyanate**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fireproof membrane materials manufactured from cationic polyurethanes, blocked **isocyanates**, and water repellents)

RN 193154-66-4 HCAPLUS

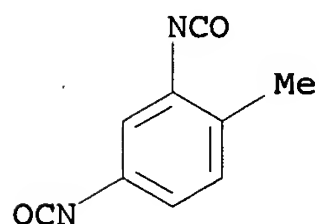
CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,4-butanediol, butyl 2-propenoate, (chloromethyl)oxirane,

1,3-diisocyanato-2-methylbenzene, 2,4-diisocyanato-1-methylbenzene,  
1,2-ethanediol and hydroxyacetic acid (9CI) (CA INDEX NAME)

CM 1

CRN 584-84-9

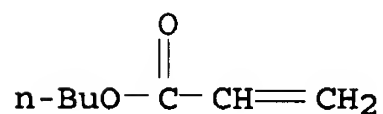
CMF C9 H6 N2 O2



CM 2

CRN 141-32-2

CMF C7 H12 O2



CM 3

CRN 124-04-9

CMF C6 H10 O4



CM 4

CRN 111-40-0

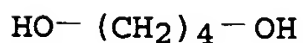
CMF C4 H13 N3



CM 5

CRN 110-63-4

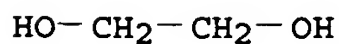
CMF C4 H10 O2



CM 6

CRN 107-21-1

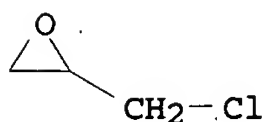
CMF C2 H6 O2



CM 7

CRN 106-89-8

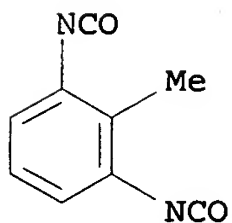
CMF C3 H5 Cl O



CM 8

CRN 91-08-7

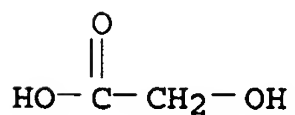
CMF C9 H6 N2 O2



CM 9

CRN 79-14-1

CMF C2 H4 O3



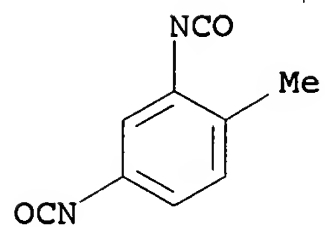
RN 193154-67-5 HCAPLUS

CN Acetic acid, hydroxy-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane, 1,3-diisocyanato-2-methylbenzene, 2,4-diisocyanato-1-methylbenzene, ethenyl acetate, 4,4'-(1-methylethylidene)bis[phenol] and oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 584-84-9

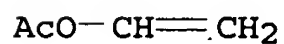
CMF C9 H6 N2 O2



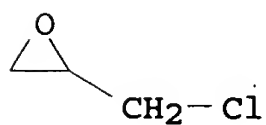
CM 2

CRN 111-40-0  
CMF C4 H13 N3

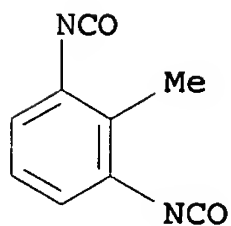
CM 3

CRN 108-05-4  
CMF C4 H6 O2

CM 4

CRN 106-89-8  
CMF C3 H5 Cl O

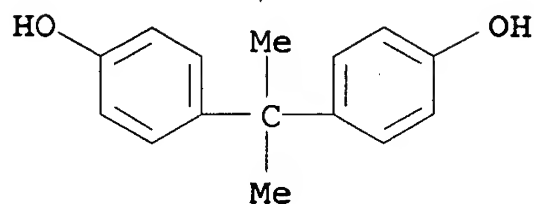
CM 5

CRN 91-08-7  
CMF C9 H6 N2 O2

CM 6

CRN 80-05-7  
CMF C15 H16 O2

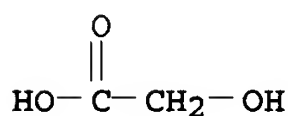




CM 7

CRN 79-14-1

CMF C2 H4 O3



CM 8

CRN 75-21-8

CMF C2 H4 O



L30 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:367395 HCAPLUS

DN 125:35990

TI Crosslinked polyurethane-polyurea fine particle dispersions for water- and chemically-resistant materials, and manufacture of the dispersions

IN Konno, Eiju; Kase, Mitsuo; Muramatsu, Ichiro; Ogoshi, Noboru

PA Dainippon Ink &amp; Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08059770	A2	19960305	JP 1994-191597	19940815
PRAI	JP 1994-191597		19940815		

AB Title dispersions containing particles with average particle size  $\leq 1 \mu\text{m}$ , useful for coatings, adhesives, inks, fiber processing agents, etc., are manufactured by treatment of polyols capable of forming ions with excess **polyisocyanates**, preparing the organic phase, dispersing the organic phase into an aqueous phase, and treating the resulting dispersions with polyamines. Thus, adduct of Placel 212 (polycaprolactone diol) and NCO-terminated 2,2-dimethylolpropionic acid-IPDI copolymer 118, Burnock Y 6-572S 66, and dibutyltin dilaurate 0.1 part were mixed in MEK, dropwise added to aqueous  $\text{NEt}_3$  solution, treated with aqueous hydrazine solution at  $80^\circ$  for 1 h, and concentrated in vacuo to give a dispersion. The dispersion was coated on a steel plate and cured at  $80^\circ$  to form water- and chemical resistant

film.

IC ICM C08G018-00  
ICS C08G018-65

CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38, 40

ST chem water resistance polyurethane polyurea; adhesive coating polyurethane  
polyurea dispersion; fiber ink polyurethane polyurea dispersion

IT Adhesives  
Chemically resistant materials  
Coating materials  
Inks  
Textiles  
Water-resistant materials  
(polyurethane-polyurea dispersions for chemical and water-resistant  
coatings, adhesives, and fiber processing agents)

IT Urethane polymers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(polyurethane-polyurea dispersions for chemical and water-resistant  
coatings, adhesives, and fiber processing agents)

IT Synthetic fibers  
RL: MSC (Miscellaneous)  
(polyurethane-polyurea dispersions for chemical and water-resistant  
coatings, adhesives, and fiber processing agents)

IT 101-68-8DP, MDI, reaction products with polyols and **polyamines**  
111-40-0DP, Diethylenetriamine, reaction products with polyols and  
**polyisocyanates** 302-01-2DP, Hydrazine, reaction products with  
polyols and **polyisocyanates** 4098-71-9DP, IPDI, reaction  
products with polyols and **polyamines** 4767-03-7DP,  
2,2-Dimethylolpropionic acid, reaction products with  
**polyisocyanates**, and polycaprolactone diol, and **polyamines**  
24980-41-4DP, Caprolactone homopolymer, diols, reaction products with  
**polyisocyanates**, polyols, and **polyamines** 25248-42-4DP,  
Caprolactone homopolymer, sru, diols, reaction products with  
**polyisocyanates**, polyols, and **polyamines**  
133757-73-0DP, Burnock DN 980S, reaction products with polyols and  
**polyamines** 149369-98-2DP, Burnock Y 6-572S, reaction products  
with polyols and **polyamines** 177765-40-1P  
177765-41-2P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); **PREP (Preparation)**; USES (Uses)  
(polyurethane-polyurea dispersions for chemical and water-resistant  
coatings, adhesives, and fiber processing agents)

IT 177765-40-1P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); **PREP (Preparation)**; USES (Uses)  
(polyurethane-polyurea dispersions for chemical and water-resistant  
coatings, adhesives, and fiber processing agents)

RN 177765-40-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with N-(2-aminoethyl)-1,2-  
ethanediamine, Burnock DN 950, ethenylbenzene, 2-hydroxyethyl  
2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

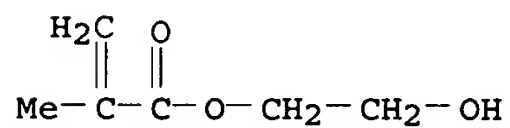
CM 1

CRN 61287-26-1  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 868-77-9  
CMF C6 H10 O3



CM 3

CRN 111-40-0  
CMF C4 H13 N3



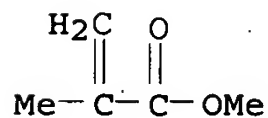
CM 4

CRN 100-42-5  
CMF C8 H8



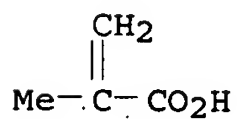
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-41-4  
CMF C4 H6 O2



DN 123:289914  
 TI Aqueous compositions for preparation of tough coatings with water and solvent resistance  
 IN Sato, Kazuo; Wada, Shuichi; Yamaji, Naotaka; Furuta, Katsushi; Fujiwara, Tsuyoshi  
 PA Dai Ichi Kogyo Seiyaku Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07138525	A2	19950530	JP 1993-283320	19931112
	JP 3333021	B2	20021007		
PRAI	JP 1993-283320		19931112		

AB The title compns. contain crosslinking agents and aqueous dispersions of amino group-containing polyurethanes prepared by reacting polyamines having  $\geq 2$  primary amino groups and  $\geq 1$  secondary amino group with aqueous dispersions of NCO-terminated urethane prepolymers. A prepolymer prepared from poly(butylene adipate), trimethylolpropane, polyethylene glycol, ethylene oxide-propylene oxide copolymer, 1,4-butanediol, and isophorone diisocyanate was reacted with diethylenetriamine in H<sub>2</sub>O containing a nonionic surfactant to give a polyurethane emulsion which was mixed with a leveling agent and glycerol triglycidyl ether, coated on steel, and heated at 80° to give a coating with resistance to water at 40°.

IC ICM C09D175-04

ICS C09D175-04; C09D005-00

CC 42-10 (Coatings, Inks, and Related Products)

ST isocyanate prepolymer polyamine epoxide coating; crosslinking epoxide polyamine polyurethane coating; emulsion polyurethane coating water resistance

IT Urethane polymers, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(in aqueous dispersions containing polyepoxides for tough coatings with water

and solvent resistance)

IT Crosslinking

(of aqueous dispersions containing polyepoxides and polyamine -modified polyurethanes for tough coatings with water resistance)

IT Crosslinking agents

(polyepoxides; in aqueous dispersions of polyamine-modified polyurethanes for tough coatings with water resistance)

IT Coating materials

(water-resistant, polyepoxide-crosslinked polyamine-modified polyurethanes from aqueous emulsions as)

IT 169602-07-7P 169602-09-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(for tough coatings with water and solvent resistance)

IT 169602-09-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(for tough coatings with water and solvent resistance)

RN 169602-09-9 HCAPLUS

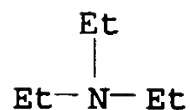
CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-(2-aminoethyl)-1,2-ethanediamine, 1,4-butanediol, carbonic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and

2,2',2'''-[1,2,3-propanetriyltris(oxymethylene)]tris[oxirane], compd. with  
N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 169602-08-8

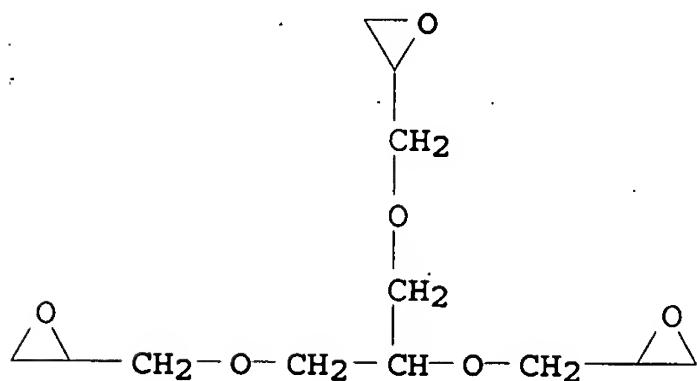
CMF (C12 H20 O6 . C12 H18 N2 O2 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 . C4  
H13 N3 . C4 H10 O2 . C H2 O3)x

CCI PMS

CM 3

CRN 13236-02-7

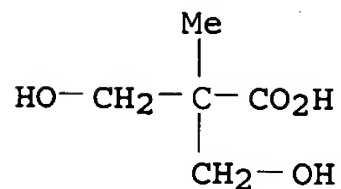
CMF C12 H20 O6



CM 4

CRN 4767-03-7

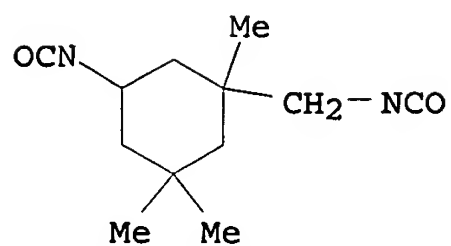
CMF C5 H10 O4



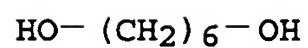
CM 5

CRN 4098-71-9

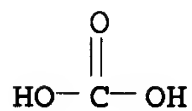
CMF C12 H18 N2 O2



CM 6

CRN 629-11-8  
CMF C6 H14 O2

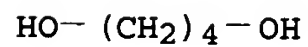
CM 7

CRN 463-79-6  
CMF C H2 O3

CM 8

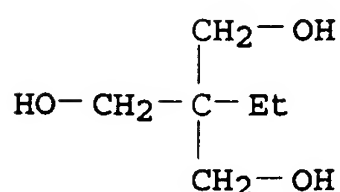
CRN 111-40-0  
CMF C4 H13 N3

CM 9

CRN 110-63-4  
CMF C4 H10 O2

CM 10

CRN 77-99-6  
CMF C6 H14 O3



L30 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:741296 HCAPLUS

DN 123:290028

TI Solvent- and water-resistant aqueous printing inks

IN Sato, Kazuo; Wada, Shuichi; Furuta, Katsushi; Yamaji, Naotaka; Fujiwara, Tsuyoshi

PA Dai Ichi Kogyo Seiyaku Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07138512	A2	19950530	JP 1993-289195	19931118
	JP 2965838	B2	19991018		
PRAI	JP 1993-289195		19931118		

AB Inks contain crosslinking agents and aqueous dispersions of active amino-containing polyurethanes prepared by treatment of polyamines having  $\geq 2$  primary amino groups and  $\geq 1$  secondary amino group with aqueous dispersions of NCO-terminated urethane prepolymers derived from compds. having  $\geq 2$  active H's and organic **polyisocyanates**. Thus, NCO-terminated urethane prepolymer [prepared from poly(butylene adipate) 350, trimethylolpropane 10.1, polyethylene glycol 35, ethylene oxide-propylene oxide copolymer 35, 1,4-butanediol 78.3, and isophorone **diisocyanate** 310 parts] was treated with 18 parts diethylenetriamine in H<sub>2</sub>O in the presence of a nonionic surfactant at 20-25° for 60 min to give an active H-containing polyurethane emulsion. The emulsion, a pigment, and glycerin triglycidyl ether were mixed and applied to corona-discharged polypropylene films to show good adhesion and water- and chemical resistance.

IC ICM C09D011-02

ICS C09D175-04

CC 42-12 (Coatings, Inks, and Related Products)

ST printing ink polyurethane polyamine

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy resin-polyester-polyurethane-polyoxyalkylene-**polyamine**

; water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT Polycarbonates, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyurethane-polycarbonate-**polyamine**-epoxy resin; water- and solvent-resistant aqueous printing inks containing crosslinked

polyurethanes)

IT Chemically resistant materials

Crosslinking

Water-resistant materials

(water- and solvent-resistant aqueous printing inks containing crosslinked

polyurethanes)

IT Solvents  
RL: MSC (Miscellaneous)  
(water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT Amines, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(poly-, epoxy resin-polyester-polyurethane-polyoxyalkylene-polyamine; water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT Urethane polymers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, epoxy resin-polyoxyalkylene-polyamine-; water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT Inks  
(printing, water-thinned, water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT 169602-07-7P 169602-09-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

IT 169602-09-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(water- and solvent-resistant aqueous printing inks containing crosslinked polyurethanes)

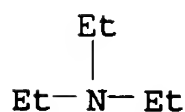
RN 169602-09-9 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-(2-aminoethyl)-1,2-ethanediamine, 1,4-butanediol, carbonic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris[oxirane], compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 169602-08-8

CMF (C12 H20 O6 . C12 H18 N2 O2 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 . C4 H13 N3 . C4 H10 O2 . C H2 O3)x

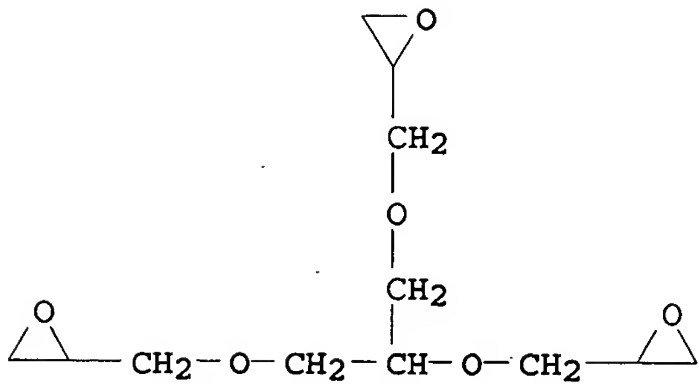
CCI PMS

CM 3

CRN 13236-02-7



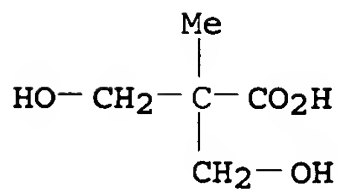
CMF C12 H20 O6



CM 4

CRN 4767-03-7

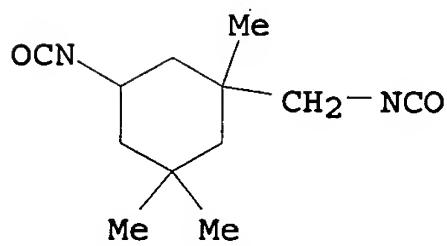
CMF C5 H10 O4



CM 5

CRN 4098-71-9

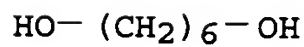
CMF C12 H18 N2 O2



CM 6

CRN 629-11-8

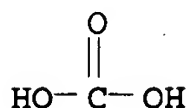
CMF C6 H14 O2



CM 7

CRN 463-79-6

CMF C H2 O3



CM 8

CRN 111-40-0  
CMF C4 H13 N3



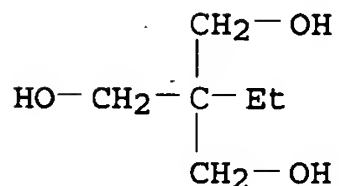
CM 9

CRN 110-63-4  
CMF C4 H10 O2



CM 10

CRN 77-99-6  
CMF C6 H14 O3



L30 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1995:325787 HCAPLUS  
DN 122:293497  
TI Water-based cationic electrodeposition coatings containing adducts of  
alkoxysilane-substituted epoxy resins and amines  
IN Yoneyama, Kenichi; Nagaoka, Jiro  
PA Kansai Paint Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06287484	A2	19941011	JP 1993-96501	19930401
PRAI	JP 1993-96501		19930401		

AB Thick title coatings with improved coverage on edges contain the title  
adducts. Thus, Epon 828 EL 1045, bisphenol A 171, diethanolamine 209.7,

and KBE 903 ( $\gamma$ -aminopropyltriethoxysilane) 221 parts were treated in 706 parts ethylene glycol mono-Bu ether; then 28.6 parts the resulted 70% adduct solution was mixed with (a) 200 parts 81% solution of a reaction product of Grishieru BPP 350 [bisphenol A glycidyl ether poly(propylene oxide) adduct] 525, bisphenol A 342, 80% monoethanolamine-Me iso-Bu ketone (I) ketimine I solution 268, bisphenol diglycidyl ether 665, and 80% diethylenetriamine-I diketimine I solution 100 parts and (b) 50.6 parts a reaction product of 222 parts isophorone diisocyanate and 174 parts Me Et ketoxime, followed by blending with 69.7 parts a paste containing TiO<sub>2</sub> to give a title coating composition. Then, a pretreated steel plate was subjected to electrodeposition coating with this composition and baked at 185° for 20 min to give a test piece showing good coverage of 20- $\mu$ m film and corrosion resistance against salt spray test on the edges.

- IC ICM C09D005-44  
ICS C09D163-00
- CC 42-5 (Coatings, Inks, and Related Products)
- ST cationic electrodeposition coating edge coverage; diethylenetriamine epoxy adduct electrodeposition coating; polyoxypropylated bisphenol A diglycidyl ether coating; isophorone diisocyanate crosslinked epoxy electrodeposition coating; ethanolamine epoxy adduct electrodeposition coating; diethanolamine epoxy adduct electrodeposition coating; aminopropylsilane epoxy adduct electrodeposition coating; alkoxysilane substituted epoxy resin electrodeposition coating; amine adduct epoxy resin electrodeposition coating; thick film coating electrodeposition; bisphenol A epoxy adduct electrodeposition coating
- IT Electrodeposits and Electroplates  
(cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT Siloxanes and Silicones, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyamine-polyoxyalkylene-polyurethane-, cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT Urethane polymers, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyamine-polyoxyalkylene-siloxane-, cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyamine-polyurethane-siloxane-, cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT Polyamines  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyoxyalkylene-polyurethane-siloxane-, cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyamine-polyoxyalkylene-polyurethane-siloxane-, cationic water-based electrodeposited thick coatings with improved coverage on edges)
- IT 111-42-2DP, Diethanolamine, reaction products with aminated epoxy resin-alkoxysilane adducts 163215-49-4DP, reaction products with diethanolamine 163215-50-7P 163215-51-8DP, reaction products with

diethanolamine and diethylamine 163215-52-9DP, reaction products with diethanolamine and diethylamine

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cationic water-based electrodeposited thick coatings with improved coverage on edges)

IT 163215-52-9DP, reaction products with diethanolamine and diethylamine

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cationic water-based electrodeposited thick coatings with improved coverage on edges)

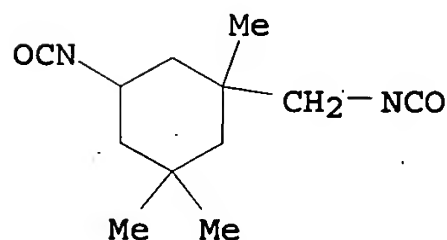
RN 163215-52-9 HCAPLUS

CN 2-Oxepanone, polymer with 2-aminoethanol, N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane, diethoxymethyl[3-(oxiranylmethoxy)propyl]silane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

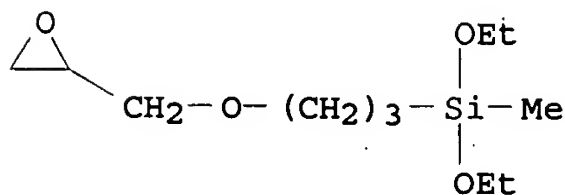
CMF C12 H18 N2 O2



CM 2

CRN 2897-60-1

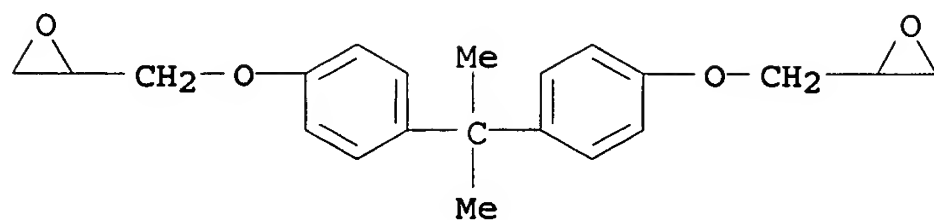
CMF C11 H24 O4 Si



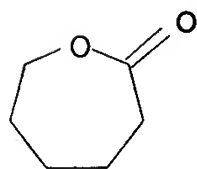
CM 3

CRN 1675-54-3

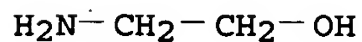
CMF C21 H24 O4



CM 4

CRN 502-44-3  
CMF C6 H10 O2

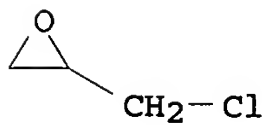
CM 5

CRN 141-43-5  
CMF C2 H7 N O

CM 6

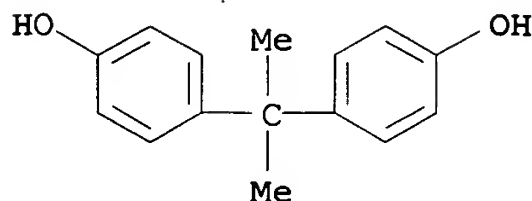
CRN 111-40-0  
CMF C4 H13 N3

CM 7

CRN 106-89-8  
CMF C3 H5 Cl O

CM 8

CRN 80-05-7  
CMF C15 H16 O2



L30 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:499465 HCAPLUS

DN 113:99465

TI Pigment dispersants prepared by reaction of imine-amines with acrylic polymers and optionally polyesters

IN Yamamoto, Toshio; Matsukura, Yoshiaki; Ohe, Osamu; Ogawa, Hisao; Ishidoya, Masahiro; Matsubara, Yoshiro

PA Nippon Oils & Fats Co., Ltd., Japan

SO Eur. Pat. Appl., 52 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 358358	A2	19900314	EP 1989-308356	19890817
	EP 358358	A3	19920122		
	EP 358358	B1	19941130		
	R: DE, ES, FR, GB				
	JP 03103478	A2	19910430	JP 1989-184497	19890719
	ES 2067547	T3	19950401	ES 1989-308356	19890817
	US 5100969	A	19920331	US 1989-395495	19890818
	CA 1324862	A1	19931130	CA 1989-609335	19890824
	US 5187229	A	19930216	US 1991-806263	19911213
PRAI	JP 1988-210789	A	19880826		
	JP 1989-119666	A	19890512		
	JP 1989-119667	A	19890512		
	JP 1989-155649	A	19890620		
	JP 1989-155650	A	19890620		
	JP 1989-184497	A	19890719		
	US 1989-395495	A3	19890818		

AB The title dispersants, useful in acrylic and polyester-based paints, are prepared by the reaction of amino and/or imino group-containing compds.

(weight-average

mol. weight 60-30,000; amine value 50-2000) with acrylic polymers containing glycidyl, acetoacetoxy, or cyclocarbonate groups and, optionally, with polyesters containing **isocyanate** or acetoacetoxy end groups.

Heating BuOH 17.05, iminobis(propylamine) 0.65, and 10:2:10:3.7:30 Bu acrylate (I)-glycidyl methacrylate-hexyl methacrylate (II)-2-hydroxyethyl methacrylate (III)-Me methacrylate copolymer (weight-average mol. weight

5,000) 82.3

parts at 120° gave a dispersant which (16 parts) was mixed with 0.7:13.3:10:12 acrylic acid-I-II-III copolymer (IV) 40, xylene 18, Cellosolve acetate 18, and carbon black 8 parts to give a paste stable for 5 days at 50°. A mixture of the paste 30.5, IV 40.6, U-Van 220 24.4, leveling agent 0.6, and thinner 3.9 parts was sprayed on primed steel precoated with alkyd-melamine resin paint and baked 30 min at 140° to give a weather-resistant coating.

IC ICM C08F008-32

ICS C09D133-14

CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 46

ST acrylic polymer pigment dispersant; polyester pigment dispersant; amine polymer pigment dispersant; imine polymer pigment dispersant; pigment dispersant coating

IT Dispersing agents  
 (aminated acrylic polymers, for pigments in coatings)

IT Pigments  
 (dispersants for, aminated acrylic polymers as, in coatings)

IT **Polyamines**  
 RL: PREP (Preparation)  
 (polypropylene-, reaction products, with acrylic polymers, preparation of, as pigment dispersants)

IT Amines, compounds  
 RL: PREP (Preparation)  
 (reaction products, with acrylic polymers, preparation of, as pigment dispersants)

IT 26351-99-5 35641-31-7 55993-98-1 62548-83-8D, esters with tall-oil fatty acids and castor oil 63150-02-7 128679-34-5 128679-35-6 128679-36-7 128769-01-7  
 RL: USES (Uses)  
 (coating compns. containing, pigment dispersants for)

IT 128679-38-9DP, reaction products with polypropylenepolyamine and acetonyl-terminated polyesters 128679-41-4DP, reaction products with polypropylenepolyamine and isocyanate-terminated polycaprolactone 128679-48-1DP, reaction products with polypropylenepolyamine 128679-49-2DP, reaction products with polypropylenepolyamine and isocyanate-terminated polyesters  
 128679-51-6P 128679-52-7P 128679-53-8P 128679-54-9P 128679-55-0P  
 128679-56-1P 128679-57-2P 128679-58-3P 128679-59-4P 128679-61-8P  
 128679-68-5P 128679-69-6P 128680-82-0P 128680-83-1P 128680-84-2P  
 128680-85-3P 128680-86-4P 128680-87-5P 128680-88-6P 128702-57-8P  
 128723-83-1DP, reaction products with polypropylenepolyamine and acetonyl-terminated polyesters 128723-84-2P 128723-85-3P  
 128723-86-4P 128723-87-5P 128723-88-6P 128723-89-7P 128723-90-0P  
 128723-91-1P 128723-92-2P 128757-08-4DP, reaction products with acetoacetoxy-containing acrylic polymers and polypropylenepolyamine  
 128757-09-5P 128757-10-8P 128955-83-9P 128955-84-0P  
 128955-85-1P 128955-86-2P 128955-87-3P 128955-88-4P  
 128955-89-5P 128955-90-8P 129059-85-4P  
 RL: TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, as pigment dispersants in coatings)

IT 674-82-8DP, reaction products with polyesters 24980-41-4DP, ε-Caprolactone homopolymer, reaction products with amines and acrylic polymers 26471-62-5DP, TDI, reaction products with polyesters  
 55918-29-1P 128679-37-8P 128679-38-9P 128679-39-0P 128679-40-3P  
 128679-41-4P 128679-42-5P 128679-43-6P 128679-44-7P 128679-45-8P  
 128679-46-9P 128679-47-0P 128679-48-1P 128679-49-2P 128679-50-5P  
 128679-55-0P 128679-60-7P 128680-81-9P 128702-37-4P 128702-38-5P  
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 128723-77-3P 128723-78-4P 128723-79-5P 128723-80-8P 128723-81-9P  
 128723-82-0P 128723-83-1P 128747-18-2P 128747-19-3P 128757-08-4P  
 128769-24-4DP, reaction products with TDI 128769-25-5DP, reaction products with diketene 128769-26-6DP, reaction products with diketene 128769-27-7DP, reaction products with TDI  
 RL: TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, for pigment dispersants)

IT 128723-84-2P 128955-84-0P 128955-88-4P

RL: TEM (Technical or engineered material use); PREP (Preparation)  
; USES (Uses)

(preparation of, as pigment dispersants in coatings)

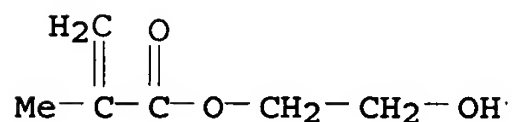
RN 128723-84-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, hexyl ester, polymer with  
N-(3-aminopropyl)-1,3-propanediamine, butyl 2-propenoate, 2-hydroxyethyl  
2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and oxiranylmethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

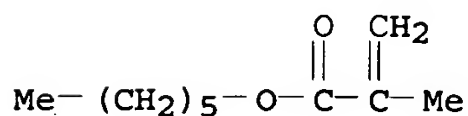
CMF C6 H10 O3



CM 2

CRN 142-09-6

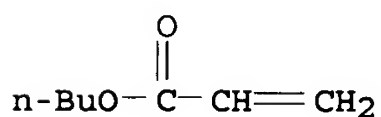
CMF C10 H18 O2



CM 3

CRN 141-32-2

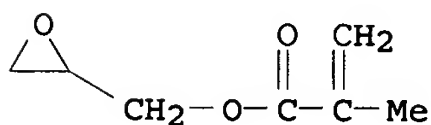
CMF C7 H12 O2



CM 4

CRN 106-91-2

CMF C7 H10 O3

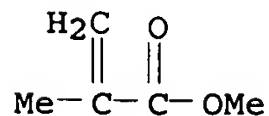


CM 5

CRN 80-62-6



CMF C5 H8 O2



CM 6

CRN 56-18-8

CMF C6 H17 N3



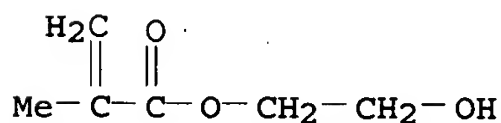
RN 128955-84-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, hexyl ester, polymer with  
N-(3-aminopropyl)-1,3-propanediamine, (butoxymethyl)oxirane polymer with  
1,3-isobenzofurandione and (phenoxymethyl)oxirane hexadecyl ester, butyl  
2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, methyl  
2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate, graft  
(9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

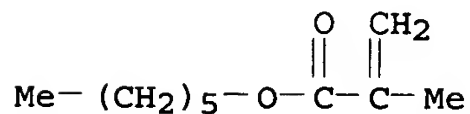
CMF C6 H10 O3



CM 2

CRN 142-09-6

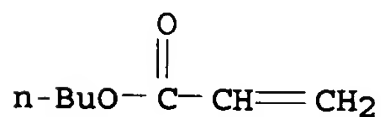
CMF C10 H18 O2



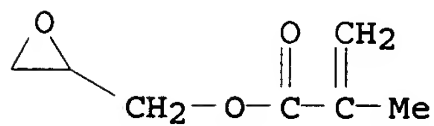
CM 3

CRN 141-32-2

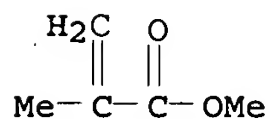
CMF C7 H12 O2



CM 4

CRN 106-91-2  
CMF C7 H10 O3

CM 5

CRN 80-62-6  
CMF C5 H8 O2

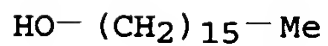
CM 6

CRN 56-18-8  
CMF C6 H17 N3

CM 7

CRN 128769-25-5  
CMF C16 H34 O . x (C9 H10 O2 . C8 H4 O3 . C7 H14 O2)x

CM 8

CRN 36653-82-4  
CMF C16 H34 O

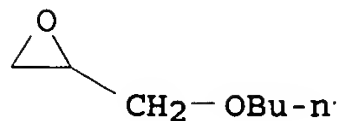
CM 9

CRN 185964-52-7  
CMF (C9 H10 O2 . C8 H4 O3 . C7 H14 O2)x  
CCI PMS

CM 10

CRN 2426-08-6

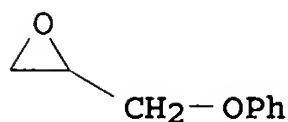
CMF C7 H14 O2



CM 11

CRN 122-60-1

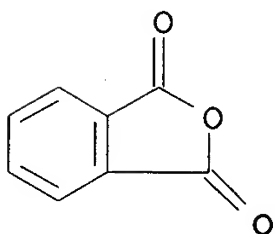
CMF C9 H10 O2



CM 12

CRN 85-44-9

CMF C8 H4 O3



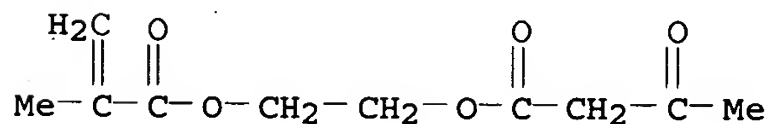
RN 128955-88-4 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with N-(3-aminopropyl)-1,3-propanediamine, (butoxymethyl)oxirane polymer with 1,3-isobenzofurandione and (phenoxymethyl)oxirane octanoate, dodecyl 2-methyl-2-propenoate, ethenylbenzene and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 21282-97-3

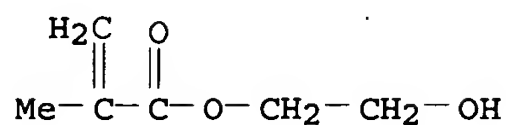
CMF C10 H14 O5



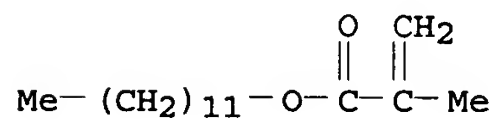
CM 2

CRN 868-77-9

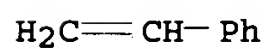
CMF C6 H10 O3



CM 3

CRN 142-90-5  
CMF C16 H30 O2

CM 4

CRN 100-42-5  
CMF C8 H8

CM 5

CRN 56-18-8  
CMF C6 H17 N3

CM 6

CRN 128769-26-6  
CMF (C9 H10 O2 . C8 H4 O3 . C7 H14 O2)x . x C8 H16 O2

CM 7

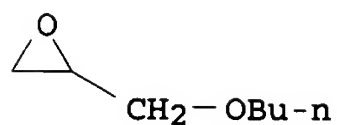
CRN 124-07-2  
CMF C8 H16 O2

CM 8

CRN 185964-52-7  
CMF (C9 H10 O2 . C8 H4 O3 . C7 H14 O2)x  
CCI PMS

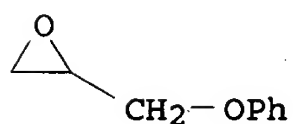
CM 9

CRN 2426-08-6  
CMF C7 H14 O2



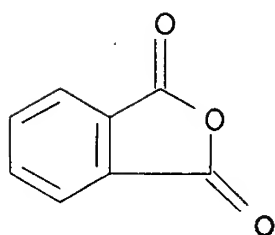
CM 10

CRN 122-60-1  
CMF C9 H10 O2



CM 11

CRN 85-44-9  
CMF C8 H4 O3



L30 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1986:150910 HCAPLUS  
DN 104:150910  
TI Polyurethane dispersions and their use as finishing agents  
IN Noll, Klaus; Thoma, Wilhelm; Nachtkamp, Klaus; Schroeer, Walter; Pedain, Josef  
PA Bayer A.-G. , Fed. Rep. Ger.  
SO Ger. Offen., 31 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3417265	A1	19851114	DE 1984-3417265	19840510
	EP 164547	A1	19851218	EP 1985-105198	19850429
	EP 164547	B1	19870603		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
	AT 27613	E	19870615	AT 1985-105198	19850429
	JP 60243163	A2	19851203	JP 1985-98176	19850510
	JP 05035744	B4	19930527		
	US 4876302	A	19891024	US 1988-284970	19881215

PRAI DE 1984-3417265 A 19840510  
 US 1985-727049 A2 19850425  
 EP 1985-105198 A 19850429  
 US 1986-939648 A2 19861209  
 US 1987-54650 A1 19870527

AB Polyurethane aqueous dispersions with good adhesion to flexible substrates and alc. resistance are prepared from polyester diols (mol. weight 500-5000) 35-55, C2-10 diols (optionally containing ≤8% triols) 6-15, anionic compds. and/or nonionic polyoxyalkylenes 1.5-15, alkylidenebis(cyclohexylene **isocyanates**) 25-45, other (cyclo)aliphatic **diisocyanates** 2-9, and polyamines (functionality >2) 0.2-4%. Thus, a 35% aqueous dispersion (containing 21% N-methylpyrrolidone) of a polyurethane prepared from adipic acid-1,6-hexanediol-neopentyl glycol polyester (OH number 56) 340, 1,4-butanediol 63, dimethylolpropionic acid 17.4, 4,4'-dicyclohexylmethane **diisocyanate** 230.6, hexamethylene **isocyanate** 37, and diethylenetriamine 5.7 parts was compounded, coated to 5 g/m2 (dry basis) on PVC, and dried 2 min at 120°, giving good adhesion.

IC ICM C09D003-72  
 ICS C09D005-02; C08G018-66; C08G018-42; C08G018-76; C08J007-04

CC 42-7 (Coatings, Inks, and Related Products)

ST polyurethane emulsion coating; polyester polyurethane emulsion; dimethylolpropionic acid polyurethane; diethylenetriamine polyurethane coating; PVC coating polyurethane aq; methylenedicyclohexylene **isocyanate** polyurethane; polyadipate polyurethane emulsion coating; polyurea polyester polyurethane coating

IT Polymerization  
 (emulsion, of polyester-polyols with **polyisocyanates** and **polyamines** and diols)

IT Coating materials  
 (emulsion, polyester-polyurea-polyurethanes for)

IT Urethane polymers, preparation  
 RL: PREP (Preparation)  
 (polyester-polyurea-, manufacture of, for printing inks)

IT Polyureas  
 RL: PREP (Preparation)  
 (polyester-polyurethane-, manufacture of, for printing inks)

IT Polyesters, preparation  
 RL: PREP (Preparation)  
 (polyurea-polyurethane-, manufacture of, for printing inks)

IT Inks  
 (printing, emulsions, polyester-polyurea-polyurethanes for)

IT 9002-86-2  
 RL: USES (Uses)  
 (coatings and printing inks for, polyurethane emulsions for)

IT 96-29-7D, reaction products with polyurethanes  
 RL: USES (Uses)  
 (emulsions, for coatings and printing inks)

IT 101382-12-1P 101384-81-0P 101384-82-1DP,  
 reaction products with butanone oxime 101384-83-2P  
 RL: PREP (Preparation)  
 (manufacture of, for emulsion coatings and printing inks)

IT 9003-11-6D, ethers with siloxanes  
 RL: USES (Uses)  
 (polyurethane emulsions containing, for coatings and printing inks)

IT 101382-12-1P 101384-81-0P 101384-82-1DP,  
 reaction products with butanone oxime 101384-83-2P  
 RL: PREP (Preparation)  
 (manufacture of, for emulsion coatings and printing inks)

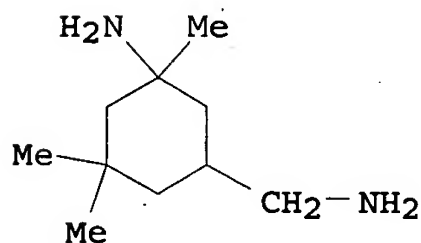
RN 101382-12-1 HCAPLUS

CN Hexanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine,

3-amino-3,5,5-trimethylcyclohexanemethanamine, 1,4-butanediol,  
1,6-diisocyanatohexane, 1,2-ethanediol, 3-hydroxy-2-(hydroxymethyl)-2-  
methylpropanoic acid, 1,1'-methylenebis[4-isocyanatocyclohexane],  
methyloxirane and oxirane (9CI) (CA INDEX NAME)

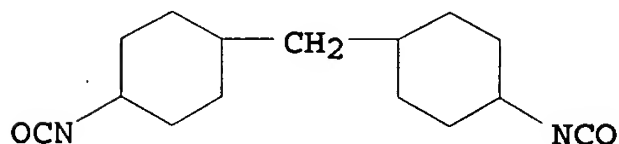
CM 1

CRN 85708-81-2  
CMF C10 H22 N2



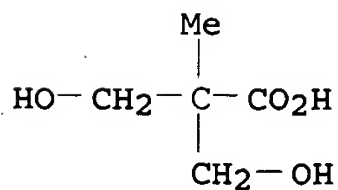
CM 2

CRN 5124-30-1  
CMF C15 H22 N2 O2



CM 3

CRN 4767-03-7  
CMF C5 H10 O4



CM 4

CRN 822-06-0  
CMF C8 H12 N2 O2



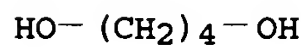
CM 5

CRN 124-04-9  
CMF C6 H10 O4



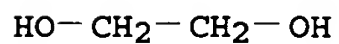
CM 6

CRN 110-63-4  
CMF C4 H10 O2



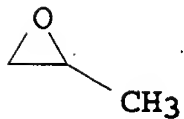
CM 7

CRN 107-21-1  
CMF C2 H6 O2



CM 8

CRN 75-56-9  
CMF C3 H6 O



CM 9

CRN 75-21-8  
CMF C2 H4 O



CM 10

CRN 56-18-8  
CMF C6 H17 N3





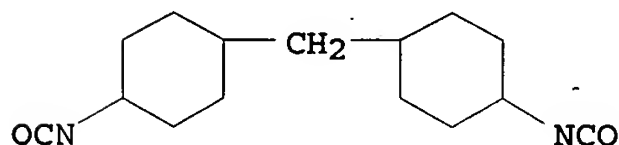
RN 101384-81-0 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,4-butanediol, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 5124-30-1

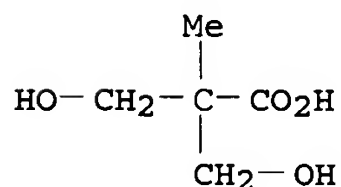
CMF C15 H22 N2 O2



CM 2

CRN 4767-03-7

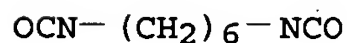
CMF C5 H10 O4



CM 3

CRN 822-06-0

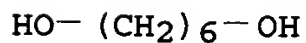
CMF C8 H12 N2 O2



CM 4

CRN 629-11-8

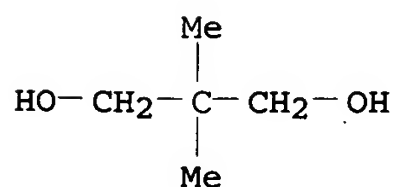
CMF C6 H14 O2



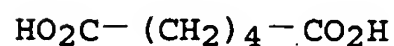
CM 5

CRN 126-30-7

CMF C5 H12 O2



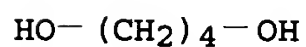
CM 6

CRN 124-04-9  
CMF C6 H10 O4

CM 7

CRN 111-40-0  
CMF C4 H13 N3

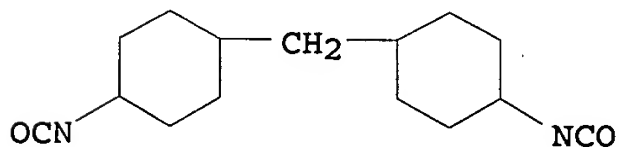
CM 8

CRN 110-63-4  
CMF C4 H10 O2

RN 101384-82-1 HCAPLUS

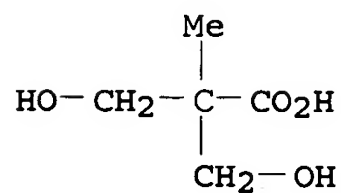
CN Hexanedioic acid, polymer with N-(3-aminopropyl)-1,3-propanediamine, 1,4-butanediol, 1,6-diisocyanatohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 1,1'-methylenebis[4-isocyanatocyclohexane] and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 5124-30-1  
CMF C15 H22 N2 O2

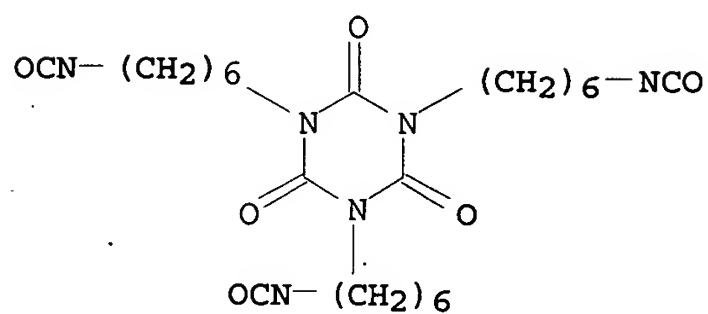
CM 2

CRN 4767-03-7  
CMF C5 H10 O4



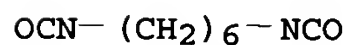
CM 3

CRN 3779-63-3  
CMF C24 H36 N6 O6



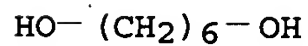
CM 4

CRN 822-06-0  
CMF C8 H12 N2 O2



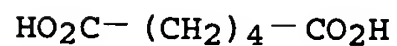
CM 5

CRN 629-11-8  
CMF C6 H14 O2

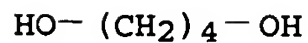


CM 6

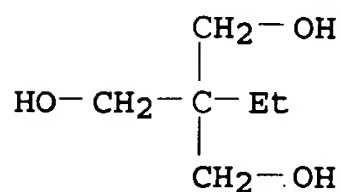
CRN 124-04-9  
CMF C6 H10 O4



CM 7

CRN 110-63-4  
CMF C4 H10 O2

CM 8

CRN 77-99-6  
CMF C6 H14 O3

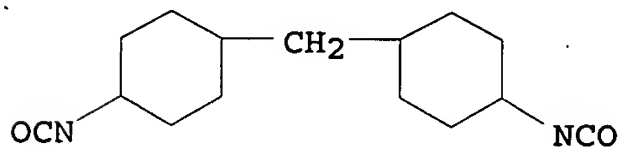
CM 9

CRN 56-18-8  
CMF C6 H17 N3

RN 101384-83-2 HCAPLUS

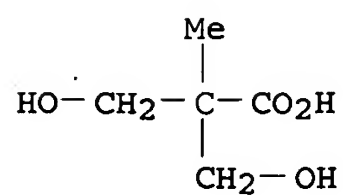
CN Carbonic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine,  
1,2-ethanediamine, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-  
methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
trimethylcyclohexane and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI)  
(CA INDEX NAME)

CM 1

CRN 5124-30-1  
CMF C15 H22 N2 O2

CM 2

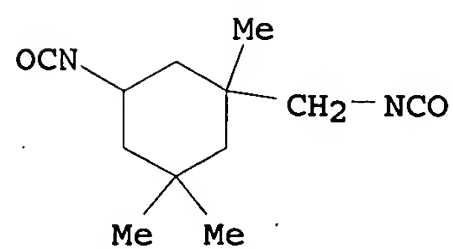
CRN 4767-03-7  
CMF C5 H10 O4



CM 3

CRN 4098-71-9

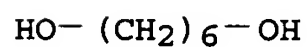
CMF C12 H18 N2 O2



CM 4

CRN 629-11-8

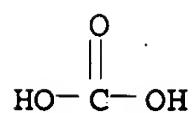
CMF C6 H14 O2



CM 5

CRN 463-79-6

CMF C H2 O3



CM 6

CRN 111-40-0

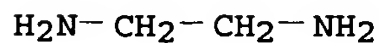
CMF C4 H13 N3



CM 7

CRN 107-15-3

CMF C2 H8 N2

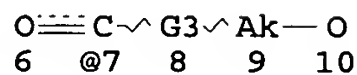
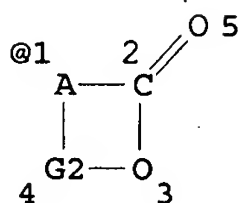


=&gt; =&gt; D QUE

L4

STR

G4 11



REP G2=(1-4) A

REP G3=(0-1) O

VAR G4=1/7

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L5 SCR 2043

L7 STR



4 5 6 7 8

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L9 1712 SEA FILE=REGISTRY SSS FUL L4 AND L7 AND L5  
 L11 843 SEA FILE=REGISTRY ABB=ON L9 AND PUA/PCT  
 L12 740 SEA FILE=REGISTRY ABB=ON L9 AND PUR/PCT  
 L13 340 SEA FILE=HCAPLUS ABB=ON L11  
 L14 290 SEA FILE=HCAPLUS ABB=ON L12  
 L15 240 SEA FILE=HCAPLUS ABB=ON L13 (L) PREP/RL  
 L16 212 SEA FILE=HCAPLUS ABB=ON L14 (L) PREP/RL  
 L17 253 SEA FILE=HCAPLUS ABB=ON L15 OR L16

L21 6 SEA FILE=HCAPLUS ABB=ON L15(L) POLYAMINE?  
 L22 4 SEA FILE=HCAPLUS ABB=ON L16(L) POLYAMINE?  
 L23 29 SEA FILE=HCAPLUS ABB=ON L17 AND POLYAMINE?/IT  
 L24 29 SEA FILE=HCAPLUS ABB=ON (L21 OR L22 OR L23)  
 L26 765 SEA FILE=HCAPLUS ABB=ON L9  
 L27 501 SEA FILE=HCAPLUS ABB=ON L26(L) PREP/RL  
 L28 90 SEA FILE=HCAPLUS ABB=ON L27 AND POLYAMINE?/IT  
 L29 20 SEA FILE=HCAPLUS ABB=ON L28 AND ?ISOCYANAT?  
 L30 31 SEA FILE=HCAPLUS ABB=ON L24 OR L29  
 L32 127 SEA FILE=HCAPLUS ABB=ON L27(L) (?ACRYL? OR ?EPOX? OR ?ANHYDRID?  
 OR ?MALEATE? OR ?FUMAR?)  
 L33 19 SEA FILE=HCAPLUS ABB=ON L28 AND L32  
 L34 10 SEA FILE=HCAPLUS ABB=ON (L33 OR L30) NOT L30

=> D L34 BIB ABS IND HITSTR 1-10

L34 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1129417 HCAPLUS

DN 143:407300

TI Resin compositions for coated paper and coating compositions and coated paper

IN Hamaguchi, Toshishige; Tanikawa, Akira

PA Taoka Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005290571	A2	20051020	JP 2004-103174	20040331
PRAI	JP 2004-103174		20040331		
AB	Coating materials contain 1 part (solids) water-soluble resins prepared from $\geq 1$ of melamine, urea, and polyamines and HCHO and 0.5-20 parts ureas. Thus, a resin composition contained 60.9% diethylenetriamine-formaldehyde-urea copolymer 31.7, urea 77.2, and water 126.4 g.				
IC	ICM D21H019-62				
CC	43-7 (Cellulose, Lignin, Paper, and Other Wood Products)				
ST	Section cross-reference(s): 42				
IT	diethylenetriamine formaldehyde urea copolymer coating paper; water sol polymer urea coating paper				
IT	Amines, reactions				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(alicyclic; coating materials for paper containing amino resins and ureas)				
IT	Alicyclic compounds				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(amines; coating materials for paper containing amino resins and ureas)				
IT	Paper				
	(coated; coating materials for paper containing amino resins and ureas)				
IT	Binders				
	Coating materials				
	(coating materials for paper containing amino resins and ureas)				
IT	Aminoplasts				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(coating materials for paper containing amino resins and ureas)				
IT	Epoxides				
	RL: RCT (Reactant); RACT (Reactant or reagent)				

(coating materials for paper containing amino resins and ureas)

IT Carboxylic acids, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (dicarboxylic; coating materials for paper containing amino resins and ureas)

IT Amines, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamines, nonpolymeric, polymers; coating materials for paper containing amino resins and ureas)

IT Amines, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (reaction products with unsatd. carboxylic acids; coating materials for paper containing amino resins and ureas)

IT Carboxylic acids, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (unsatd., reaction products with amines; coating materials for paper containing amino resins and ureas)

IT 61472-52-4P, Diethylenetriamine-formaldehyde-urea copolymer  
 867031-34-3P, Ethylene glycol-formaldehyde-methyltetrahydrophthalic anhydride-tetrahydrophthalic anhydride-triethylenetetramine copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (coating materials for paper containing amino resins and ureas)

IT 57-13-6, Urea, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coating materials for paper containing amino resins and ureas)

IT 867031-34-3P, Ethylene glycol-formaldehyde-methyltetrahydrophthalic anhydride-tetrahydrophthalic anhydride-triethylenetetramine copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (coating materials for paper containing amino resins and ureas)

RN 867031-34-3 HCAPLUS

CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydromethyl-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, 1,2-ethanediol, formaldehyde and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

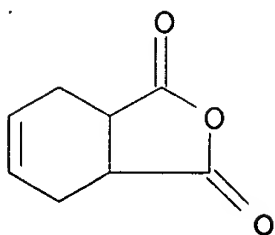
CM 1

CRN 26590-20-5

CMF C9 H10 O3

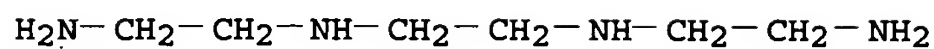
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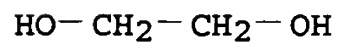


D1-Me

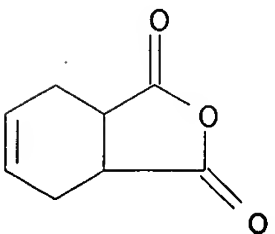
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CRN 112-24-3  
CMF C6 H18 N4

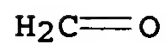
CM 3

CRN 107-21-1  
CMF C2 H6 O2

CM 4

CRN 85-43-8  
CMF C8 H8 O3

CM 5

CRN 50-00-0  
CMF C H2 O

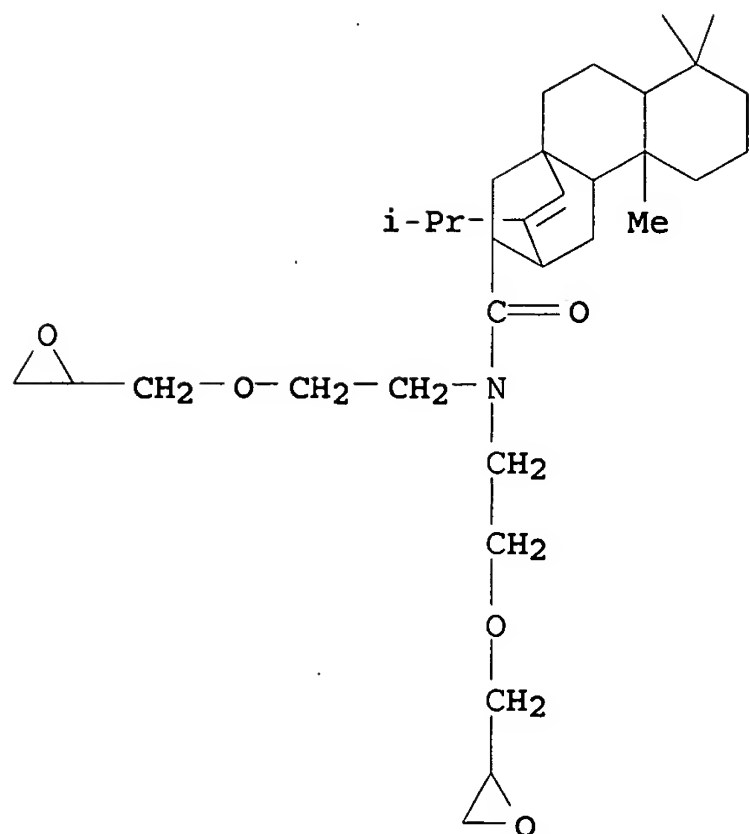
AN 2005:617884 HCAPLUS  
 DN 144:255713  
 TI Synthesis and characterization of tetra-functional epoxy resins from rosin  
 AU Atta, Ayman M.; Mansour, R.; Abdou, Mahmoud I.; El-Sayed, Ashraf M.  
 CS Egyptian Petroleum Research Institute, Cairo, 11727, Egypt  
 SO Journal of Polymer Research (2005), 12(2), 127-138  
 CODEN: JPOREP; ISSN: 1022-9760  
 PB Springer  
 DT Journal  
 LA English  
 AB Tetra-functional epoxy resins were prepared by the reaction of diethanolamine with Diels-Alder adducts of rosin ketone. These adducts were reacted with epichlorohydrin in the presence of NaOH as a catalyst to produce epoxy resins. The resins obtained were characterized by IR and <sup>1</sup>H NMR spectroscopy. The curing behaviors of these resins with their poly(amide-imide) derivs. were investigated by viscosity measurements. The curing activation energy was calculated from the gel time and critical viscosity measurements. The curing exotherms of the epoxy resins produced with poly(amide-imide) hardeners were investigated. The curing and gel times of the resins produced show slight differences between the synthesized resins. The chemical resistance and mech. properties of the cured films were evaluated. The produced coatings show high stability for salt spray at a duration time of 563 h.  
 CC 42-9 (Coatings, Inks, and Related Products)  
 ST rosin tetrafunctional epoxy resin coating material prepn property  
 IT Coating materials  
     (epoxy resin; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT **Polyamines**  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (epoxy-polyamide-, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT Polyamides, properties  
     Polyimides, properties  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (epoxy-polyamine-, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT **Polyamines**  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (epoxy-polyimide-, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT Crosslinking  
     (of tetra-functional epoxy resins from rosin)  
 IT Epoxy resins, properties  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (polyamide-polyamine-, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT Epoxy resins, properties  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (polyamine-polyimide-, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT Resin acids  
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
         (reaction products, with acrylic acid and maleic anhydride, polymers with polyalkylenepolyamines and tetra-functional epoxy resins, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)  
 IT Hardness (mechanical)  
     Impact strength  
     (synthesis and characterization of tetra-functional epoxy resins from

- rosin)
- IT Epoxy resins, properties  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and characterization of tetra-functional epoxy resins from rosin)
- IT Adhesion, physical  
(to steel; of tetra-functional epoxy resins from rosin)
- IT 79-10-7DP, Acrylic acid, reaction products with rosin acids, polymers with polyalkylenepolyamines and tetra-functional epoxy resins 108-31-6DP, Maleic anhydride, reaction products with rosin acids, polymers with polyalkylenepolyamines and tetra-functional epoxy resins 112-24-3DP, Triethylenetetramine, polymers with rosin-unsatd. carboxylic acid adducts and tetra-functional epoxy resins 37184-46-6DP, Pentaethylenetetramine, polymers with rosin-unsatd. carboxylic acid adducts and tetra-functional epoxy resins  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)
- IT 877224-27-6P 877224-28-7P 877224-29-8P 877224-30-1P  
877224-31-2P 877224-32-3P 877224-33-4P  
877224-34-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(crosslinked, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)
- IT 79-10-7, Acrylic acid, reactions 108-31-6, Maleic anhydride, reactions 111-42-2, Diethanolamine, reactions 206977-96-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in synthesis of monomers for preparation of tetra-functional epoxy resins from rosin)
- IT 223379-72-4P 877224-18-5P, Acrylodibietyl ketone  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in synthesis of monomers for preparation of tetra-functional epoxy resins from rosin)
- IT 877224-20-9P 877224-22-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(monomer; for synthesis of tetra-functional epoxy resins)
- IT 877224-24-3P 877224-26-5P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis and characterization of tetra-functional epoxy resins from rosin)
- IT 877224-31-2P 877224-32-3P 877224-33-4P  
877224-34-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(crosslinked, coatings; synthesis and characterization of tetra-functional epoxy resins from rosin)
- RN 877224-31-2 HCAPLUS
- CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (4 $\alpha$ ,8 $\xi$ ,12 $\xi$ )-(4' $\alpha$ ,8' $\xi$ ,12' $\xi$ )-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (4 $\alpha$ ,16 $\beta$ )-(4' $\alpha$ ,16' $\beta$ )-4,4'-carbonylbis[10-(1-methylethyl)-N,N-[2-(oxiranylmethoxy)ethyl]-19-noratis-9-en-17-amide] (9CI) (CA INDEX NAME)

CM 1



PAGE 2-A

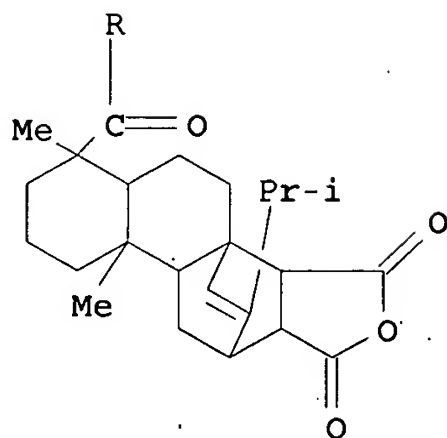


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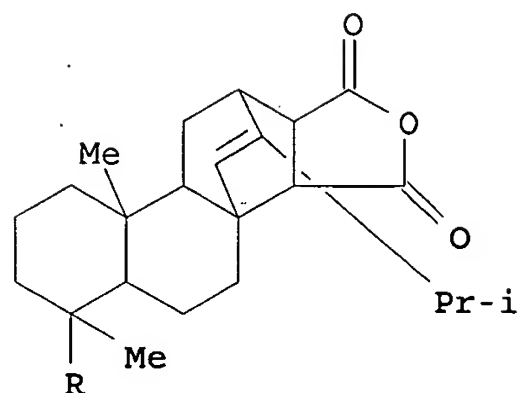
CRN 223379-72-4

CMF C47 H62 O7

PAGE 1-A

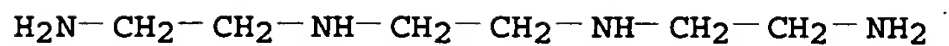


PAGE 2-A



CM 3

CRN 112-24-3  
CMF C6 H18 N4



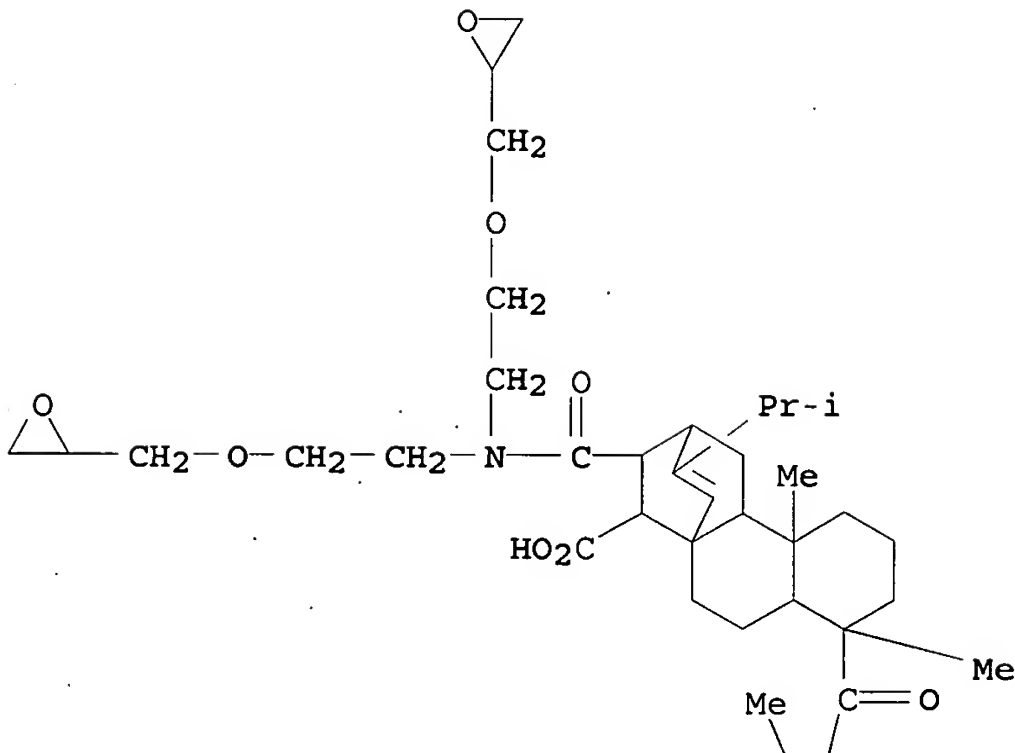
RN 877224-32-3 HCAPLUS

CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (4 $\alpha$ ,8 $\xi$ ,12 $\xi$ )-(4' $\alpha$ ,8' $\xi$ ,12' $\xi$ )-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (4 $\alpha$ ,15 $\beta$ ,16 $\beta$ )-(4' $\alpha$ ,15' $\beta$ ,16' $\beta$ )-4,4'-carbonylbis[17-[bis[2-(oxiranylmethoxy)ethyl]amino]-10-(1-methylethyl)-17-oxo-19-noratis-9-ene-15-carboxylic acid] (9CI) (CA INDEX NAME)

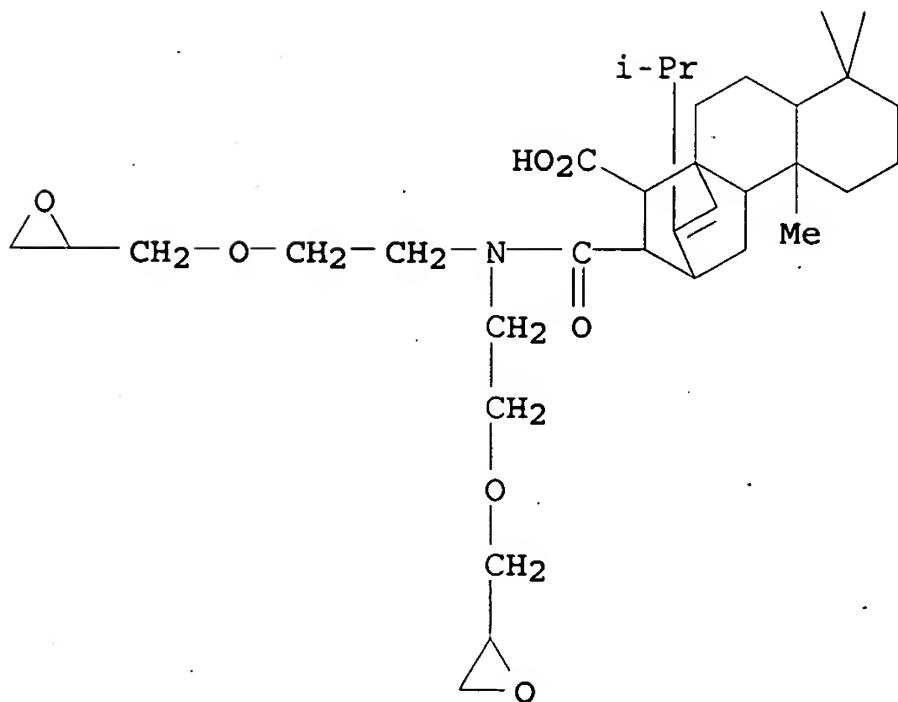
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CRN 877224-23-2  
CMF C67 H100 N2 O15

PAGE 1-A



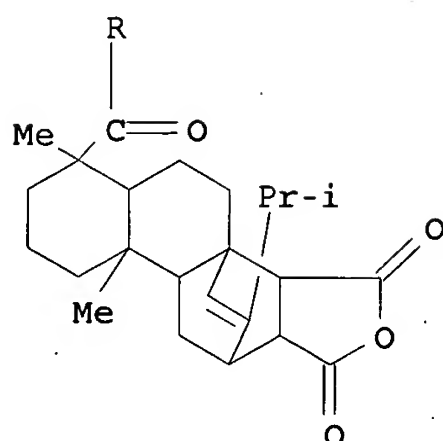
PAGE 2-A



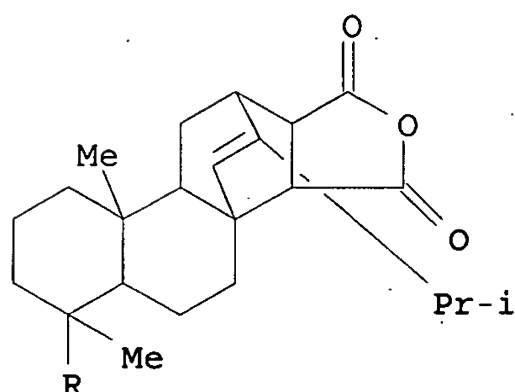
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CRN 223379-72-4  
CMF C47 H62 O7

PAGE 1-A

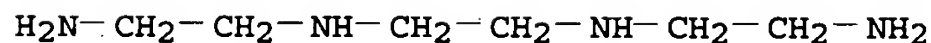


PAGE 2-A



CM 3

CRN 112-24-3  
CMF C6 H18 N4



RN 877224-33-4 HCAPLUS

CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (4 $\alpha$ ,8 $\xi$ ,12 $\xi$ )-(4' $\alpha$ ,8' $\xi$ ,12' $\xi$ )-, polymer with (4 $\alpha$ ,16 $\beta$ )-(4' $\alpha$ ,16' $\beta$ )-4,4'-carbonylbis[10-(1-methylethyl)-N,N-[2-(oxiranylmethoxy)ethyl]-19-noratis-9-en-17-amide] and 3,6,9,12-tetraazatetradecane-1,14-diamine, (4 $\alpha$ ,8 $\xi$ ,12 $\xi$ )-(4' $\alpha$ ,8' $\xi$ ,12' $\xi$ )-(9CI) (CA INDEX NAME)

CM 1

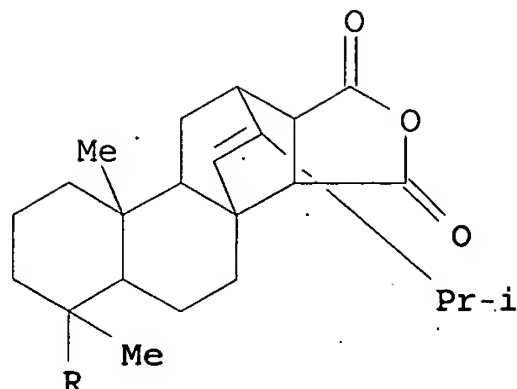
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CMF C65 H100 N2 O11







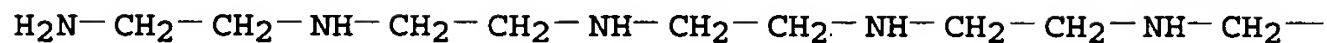
PAGE 2-A



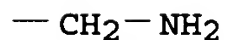
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CRN 4067-16-7  
CMF C10 H28 N6

PAGE 1-A



PAGE 1-B

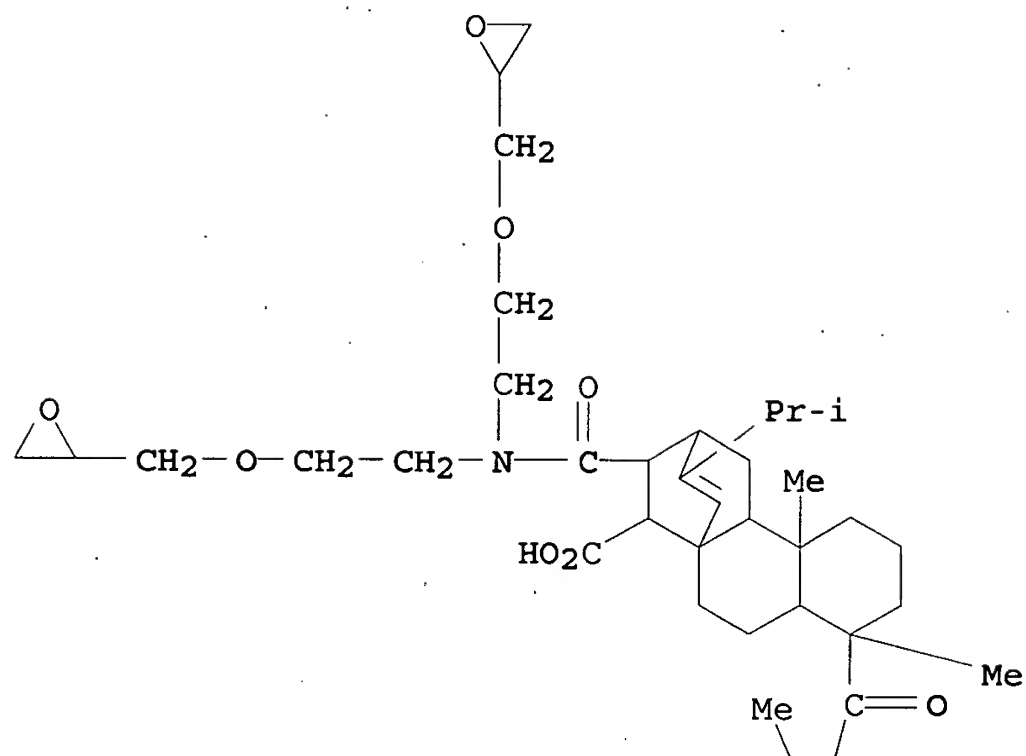


RN 877224-34-5 HCAPLUS  
CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (4 $\alpha$ ,8 $\xi$ ,12 $\xi$ )-(4' $\alpha$ ,8' $\xi$ ,12' $\xi$ )-, polymer with (4 $\alpha$ ,15 $\beta$ ,16 $\beta$ )-(4' $\alpha$ ,15' $\beta$ ,16' $\beta$ )-4,4'-carbonylbis[17-[bis[2-(oxiranylmethoxy)ethyl]amino]-10-(1-methylethyl)-17-oxo-19-noratis-9-ene-15-carboxylic acid] and 3,6,9,12-tetraazatetradecane-1,14-diamine (9CI)  
(CA INDEX NAME)

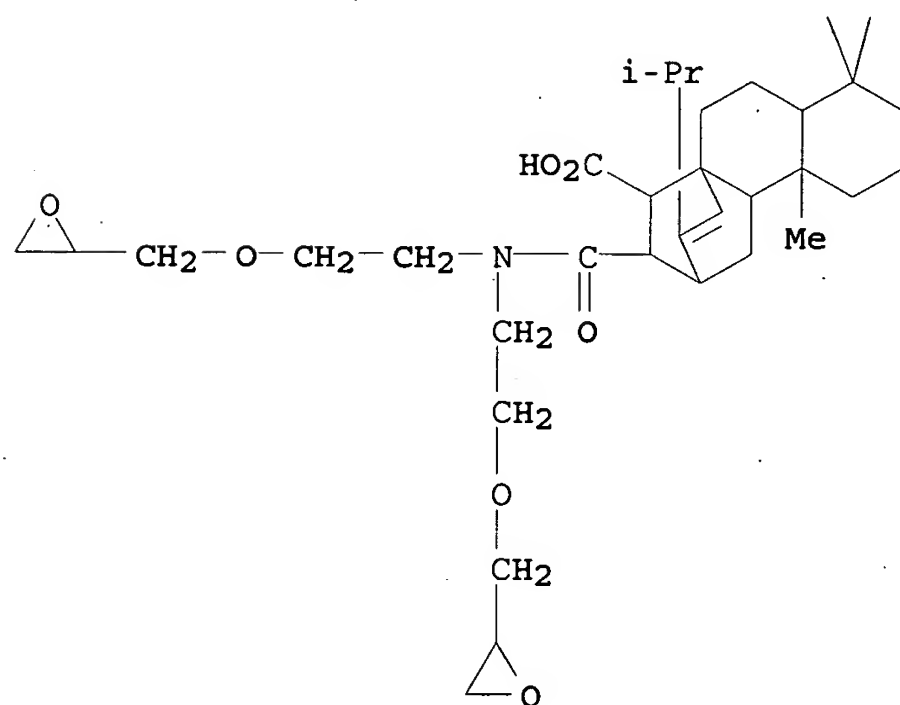
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CRN 877224-23-2  
CMF C67 H100 N2 O15

PAGE 1-A



PAGE 2-A

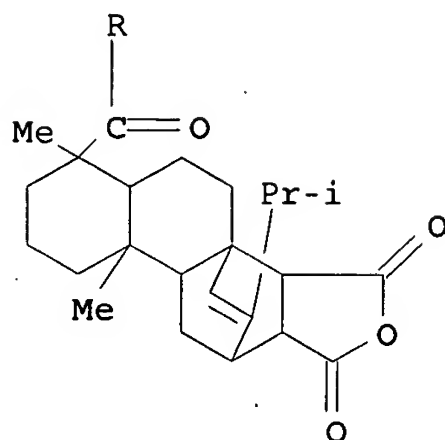


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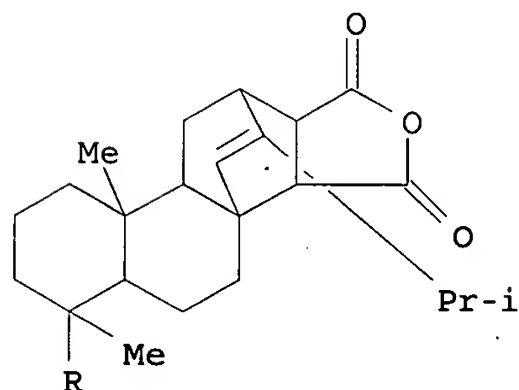
CRN 223379-72-4

CMF C47 H62 O7

PAGE 1-A



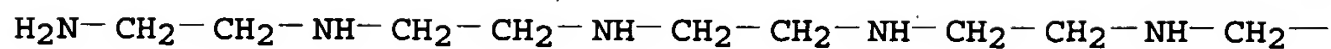
PAGE 2-A



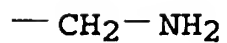
CM 3

CRN 4067-16-7  
CMF C10 H28 N6

PAGE 1-A



PAGE 1-B



RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:993139 HCAPLUS  
DN 141:412633  
TI Amideamine compounds, amideamine-urea compounds, their paper coating compositions, and their water-resistant coated papers with good printability  
IN Han, Cheng-Chi  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004323465	A2	20041118	JP 2003-123277	20030428
PRAI	JP 2003-123277		20030428		

OS MARPAT 141:412633

AB The amideamine compds. are represented by the general formula  
 $R_3NH(CmH_{2m}NH)pCH_2CHR_1C(O)NH(CnH_{2n}NH)qR_2$  [I;  $R_1 = H, Me$ ;  $R_2 = H, C(O)R_4C(O)NH(CtH_{2t}NH)rH$  (II);  $R_3 = II$ ;  $R_4 =$  alicyclic hydrocarbylene which may involve ester bond;  $p, q, r = 1-6$  integer;  $m, n = 2-6$  integer]. The compds. I are reacted with aliphatic carboxylic acids and ureas to give amideamine-urea compds. Papers are coated with coating compns. containing water-based solution of amideamine-urea compds., pigments, and water-based binders. Thus, 297.3 g (0.80 mol on ethylene glycol) of a carboxyl-terminated ester prepared by reacting HN 2000 (blend of 3- and 4-methyltetrahydrophthalic anhydride), tetrahydrophthalic anhydride, and ethylene glycol was reacted with 605.8 g (3.20 mol) tetraethylenepentamine while removing generated water to give a polyamide-polyamine, 266.8 g of which was subjected to Michael addition with 30.4 g Bu acrylate in the presence of H<sub>2</sub>O to give a water-based solution containing I. I was reacted with

68.5 g 2-ethylhexanoic acid while removing water to give a solution of the reaction product, 122.0 g of which was subjected to NH<sub>3</sub>-removal reaction with 25.2 g urea to give a 60.0%-solid solution of II with Brookfield-type viscosity 0.177 mPa·s. A paper coating comprised pigments (Ultrawhite 90, Carbital 9), a dispersing agent (Aron T 40), a styrene-butadiene latex, a urea-starch phosphate compound (MS 4600), and II.

IC ICM C07C237-10

ICS C07C233-62; C07C275-14; D21H019-62

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

ST amideamine urea paper coating water resistance; coated printing paper  
 amideamine urea coating

IT **Polyamines**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (polyamide-; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT **Polyureas**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamide-polyamine-; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT **Polyamines**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamide-polyurea-; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT **Polyamides, reactions**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (polyamine-; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT **Polyamides, uses**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyamine-polyurea-; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT Paper  
 (printing, coated; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT 57-13-6DP, Urea, reaction products with Michael adduct of Bu acrylate with ethylene glycol-methyltetrahydrophthalic anhydride-tetraethylenepentamine-tetrahydrophthalic anhydride copolymer, and 2-ethylhexanoic acid  
 141-32-2DP, Butyl acrylate, Michael adduct with ethylene glycol-methyltetrahydrophthalic anhydride-tetraethylenepentamine-tetrahydrophthalic anhydride copolymer, reaction products with 2-ethylhexanoic acid and urea 149-57-5DP, 2-Ethylhexanoic acid, reaction products with Michael adduct of Bu acrylate with ethylene glycol-methyltetrahydrophthalic anhydride-tetraethylenepentamine-tetrahydrophthalic anhydride copolymer, and urea 791816-97-2DP, Ethylene glycol-HN 2000-tetraethylenepentamine-tetrahydrophthalic anhydride copolymer, Michael adduct with Bu acrylate, reaction products with 2-ethylhexanoic acid and urea  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT 100-42-5D, Styrene, butadiene polymer 106-99-0D, Butadiene, styrene polymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (latex, water-based binder for coating; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

IT 127149-16-0, MS 4600  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (water-based binder for coating; amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

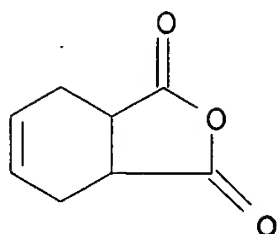
IT 791816-97-2DP, Ethylene glycol-HN 2000-tetraethylenepentamine-tetrahydrophthalic anhydride copolymer, Michael adduct with Bu acrylate, reaction products with 2-ethylhexanoic acid and urea  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (amideamine compds. and amideamine-urea compds. for water-resistant coated papers with good printability)

RN 791816-97-2 HCAPLUS

CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydromethyl-, polymer with N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, 1,2-ethanediol and 3a,4,7,7a-tetrahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 26590-20-5  
 CMF C9 H10 O3  
 CCI IDS



D1-Me

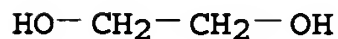
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CRN 112-57-2  
CMF C8 H23 N5



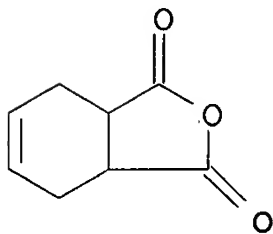
CM 3

CRN 107-21-1  
CMF C2 H6 O2



CM 4

CRN 85-43-8  
CMF C8 H8 O3



L34 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:288508 HCAPLUS  
DN 141:7554  
TI Ketone derivatives of Diels-Alder adducts of levopimaric acid with acrylic acid and maleic anhydride: synthesis, characterization, and polymerization  
AU Bicu, Ioan; Mustata, Fanica  
CS Institute of Macromolecular Chemistry "P.Poni", Iasi, 6600, Rom.  
SO Journal of Applied Polymer Science (2004), 92(4), 2240-2252  
CODEN: JAPNAB; ISSN: 0021-8995  
PB John Wiley & Sons, Inc.  
DT Journal



- LA English
- AB Two new ketone-type derivs. were synthesized by the dehydrodecarboxylation of levopimaric acid acrylic acid adduct and of levopimaric acid maleic anhydride adduct in the presence of sulfonic catalysts. The two compds. were also synthesized by coupling of acrylic acid or maleic anhydride with dipimaryl ketone. These ketones, or rather ketone-diacids, were condensed with polyalkylenepolyamines to give poly(amide)s or poly(imide)s with good thermal properties. New crosslinked polymers were obtained when these poly(amide)s or poly(imide)s were substituted with epichlorohydrin. The structures of the resulted ketone-diacids and polymers were investigated by the usual phys. and chemical methods.
- CC 35-5 (Chemistry of Synthetic High Polymers)
- ST levopimaric adduct acrylic acid maleic anhydride decarboxylation ketone prepn; polyamide polyimide prepn pimaryl ketone epichlorohydrin crosslinking
- IT **Polyamines**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyamide-; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT Polyamides, preparation  
 Polyimides, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyamine-; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT **Polyamines**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyimide-; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT Thermal stability  
 (synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT 695215-34-0P 695215-35-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
 (**Preparation**)  
 (crosslinked; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with **acrylic** acid and maleic anhydride)
- IT 79-10-7, Acrylic acid, reactions 108-31-6, Maleic anhydride, reactions 510-39-4, Maleopimaric acid 16022-81-4 206977-96-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (monomer synthesis; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT 695215-27-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer, prepared by D-A addition of acrylic acid; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT 223379-72-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer, prepared by D-A addition of maleic anhydride; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)
- IT 695201-01-5P 695201-05-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer, prepared by decarboxylation; synthesis and polymerization of ketones

from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)

IT 695201-08-2P 695201-11-7P 695215-30-6P 695215-33-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)

(synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)

IT 695215-35-1P

RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)

(crosslinked; synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)

RN 695215-35-1 HCAPLUS

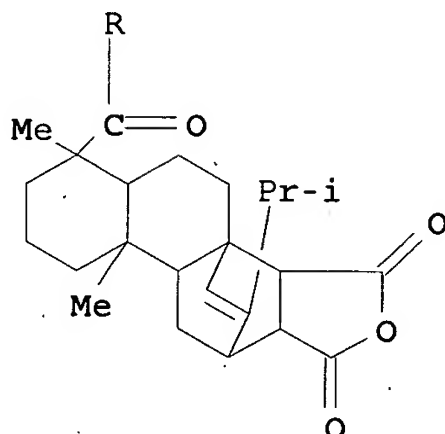
CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (8ξ,12ξ)-(8'ξ,12'ξ)-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

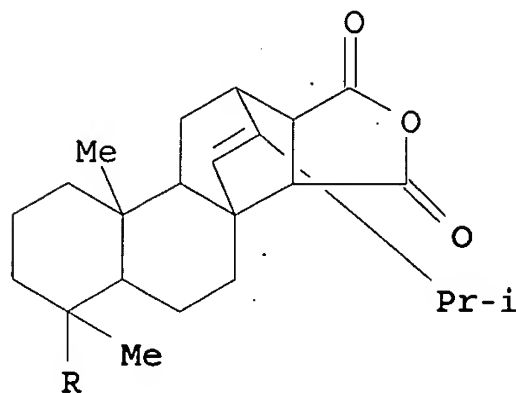
CRN 695215-32-8

CMF C47 H62 O7

PAGE 1-A



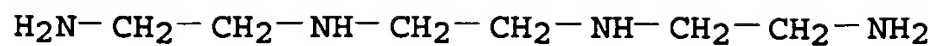
PAGE 2-A



CM 2

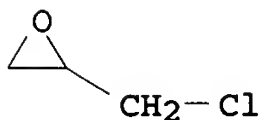
CRN 112-24-3

CMF C6 H18 N4



CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



IT 695215-33-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
(Preparation)

(synthesis and polymerization of ketones from levopimaric acid Diels-Alder adducts with acrylic acid and maleic anhydride)

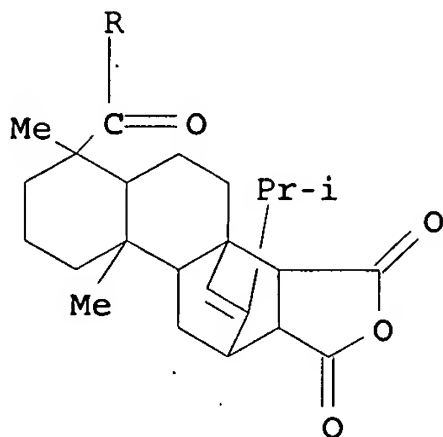
RN 695215-33-9 HCAPLUS

CN 17,19-Dinoratis-15-ene-13,14-dicarboxylic acid, 4,4'-carbonylbis[16-(1-methylethyl)-, 13,14:13',14'-dianhydride, (8ξ,12ξ)-(8'ξ,12'ξ)-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine (9CI) (CA INDEX NAME)

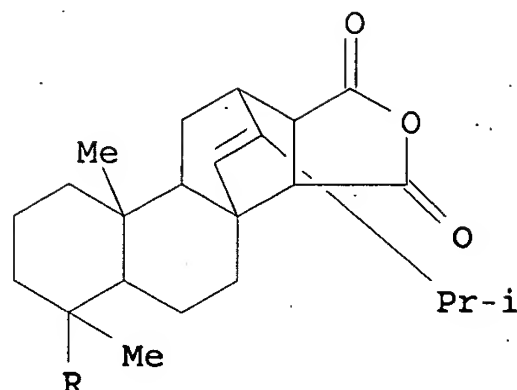
CM 1

CRN 695215-32-8  
CMF C47 H62 O7

PAGE 1-A

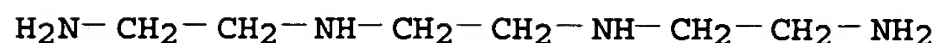


PAGE 2-A



CM 2

CRN 112-24-3  
CMF C6 H18 N4



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2002:901305 HCAPLUS  
DN 137:386213  
TI Polyamideamine-epichlorohydrin resins for paper coatings and compositions therewith  
IN Miyamoto, Kazuya; Iwata, Satoru; Suzuki, Yoshinori  
PA Japan PMC Corporation, Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002339290	A2	20021127	JP 2001-140687	20010510
PRAI	JP 2001-140687		20010510		

AB Title resins with good ink acceptability and wet pick strength are obtained by reacting components selected from epichlorohydrin and  $\alpha,\gamma$ -dihalo- $\beta$ -hydrins and polyamideamine resins obtained from 1 mol amine components selected from polyamines  $\text{R}_1\text{R}_2\text{N}[(\text{CH}_2)_p\text{NR}_3]_q(\text{CH}_2)_r\text{NR}_4\text{R}_5$  and carbocyclic amino compds. and 1.05-3 mol components selected from carbocyclic polybasic-type carboxylic acids having  $\geq 1$  carboxylic group bound to each adjacent carbon atoms, carbocyclic polybasic-type carboxylic acid anhydrides, and carbocyclic polybasic-type carboxylic acid alkyl esters, where  $\geq 2$  amino groups from terminal amino groups and an amino group in the mol. chain have amide- or imide-bonding formable hydrogens and  $\text{R}_1, \text{R}_2, \text{R}_3, \text{R}_4, \text{R}_5$  are may be same or different each other, wherein  $\text{R}_1, \text{R}_2, \text{R}_3, \text{R}_4, \text{R}_5 = \text{H}, \text{alkyl}, \text{allyl}, \text{or aryl}; p, r = 1-10; \text{ and } q = 0-10$ . Thus, 1 mol tetraethylenepentamine and 3 mol tetrahydrophthalic anhydride were reacted at  $120^\circ$  for 3 h, 0.2 mol epichlorohydrin was added therein and reacted at  $80^\circ$  for 1 h to give a 50%-solids aqueous resin with B-type

viscosity 481 mPa·s, 0.5 parts of which was mixed with Ultrawhite clay 60, FMT 90 40, JSR 0623A binder 11, MS 4600 4, and Aron T 40 0.1 parts, applied on a paper, and dried at 130° for 10 s under hot air to give a coated paper showing good ink acceptability, wet pick strength 4.6, and air permeability 2800.

IC ICM D21H019-62

ICS C08G069-48

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 42

ST polyamideamine epichlorohydrin resin paper coating ink acceptability wet pick; tetraethylenepentamine tetrahydrophthalic anhydride polyamideamine epichlorohydrin resin prep

IT Polyimides, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-; preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT Polyamines

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyimide-; preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT Paper

(preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT Thickening agents

(urea; preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT Coating materials

(water-resistant; preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT 106-89-8DP, Epichlorohydrin, reaction products with polyamideamines

**362684-35-3DP**, Tetraethylenepentamine-tetrahydrophthalic

**anhydride** copolymer, reaction products with epichlorohydrin

**362684-40-0DP**, 3-Methyltetrahydrophthalic **anhydride**

-tetraethylenepentamine copolymer, reaction products with epichlorohydrin

**362684-41-1DP**, Adipic acid-hexahydrophthalic **anhydride**

-triethylenetetramine copolymer, reaction products with epichlorohydrin

**362684-42-2DP**, Tetrahydrophthalic **anhydride**

-triethylenetetramine copolymer, reaction products with epichlorohydrin

476005-11-5DP, Phthalic anhydride-tetraethylenepentamine copolymer,

reaction products with epichlorohydrin **476181-76-7DP**, reaction

products with epichlorohydrin

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); **PREP**

(Preparation); USES (Uses)

(preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT 57-13-6, Urea, uses

RL: MOA (Modifier or additive use); USES (Uses)

(thickener; preparation of polyamideamine-epichlorohydrin resins for paper coating compns.)

IT **362684-35-3DP**, Tetraethylenepentamine-tetrahydrophthalic **anhydride** copolymer, reaction products with epichlorohydrin

**362684-40-0DP**, 3-Methyltetrahydrophthalic **anhydride**

-tetraethylenepentamine copolymer, reaction products with epichlorohydrin

**362684-41-1DP**, Adipic acid-hexahydrophthalic **anhydride**

-triethylenetetramine copolymer, reaction products with epichlorohydrin

362684-42-2DP, Tetrahydrophthalic anhydride  
 -triethylenetetramine copolymer, reaction products with epichlorohydrin  
 476181-76-7DP, reaction products with epichlorohydrin  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
 (preparation of polyamideamine-epichlorohydrin resins for paper coating  
 compns.)

RN 362684-35-3 HCAPLUS  
 CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydro-, polymer with  
 N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI)  
 (CA INDEX NAME)

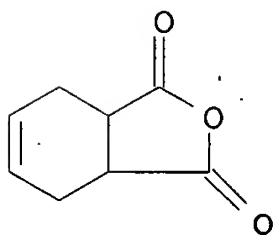
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CRN 112-57-2  
 CMF C8 H23 N5



CM 2

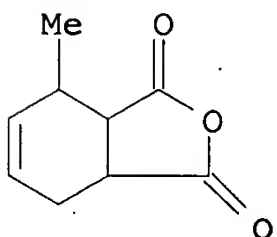
CRN 85-43-8  
 CMF C8 H8 O3



RN 362684-40-0 HCAPLUS  
 CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydro-4-methyl-, polymer with  
 N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI)  
 (CA INDEX NAME)

CM 1

CRN 5333-84-6  
 CMF C9 H10 O3



CM 2

CRN 112-57-2

CMF C8 H23 N5



RN 362684-41-1 HCAPLUS

CN Hexanedioic acid, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and hexahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9

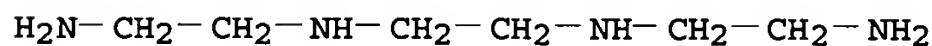
CMF C6 H10 O4



CM 2

CRN 112-24-3

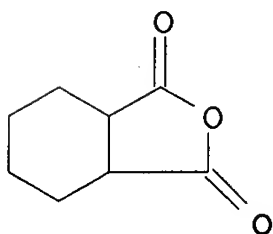
CMF C6 H18 N4



CM 3

CRN 85-42-7

CMF C8 H10 O3



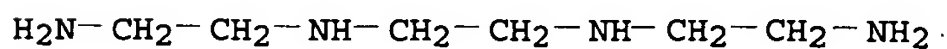
RN 362684-42-2 HCAPLUS

CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydro-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

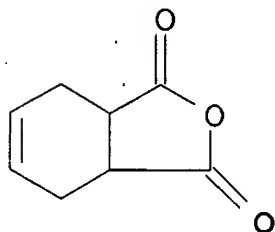
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CMF C6 H18 N4



CM 2

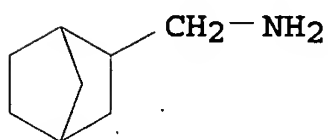
CRN 85-43-8  
CMF C8 H8 O3



RN 476181-76-7 HCAPLUS  
CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydro-, polymer with  
N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine and  
bicyclo[2.2.1]heptane-2,?-dimethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 62196-77-4  
CMF C9 H18 N2  
CCI IDS



D1-CH<sub>2</sub>-NH<sub>2</sub>

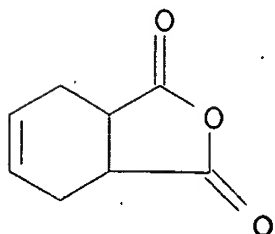
CM 2

CRN 112-57-2  
CMF C8 H23 N5

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>

CM 3

CRN 85-43-8  
CMF C8 H8 O3





L34 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:111916 HCAPLUS

DN 130:189386

TI Epoxy resin-coated electrophotographic carrier and its manufacture

IN Hiramatsu, Kazuyuki; Mochizuki, Takeshi; Yamamoto, Keita; Sakaguchi, Hiroyuki

PA Fuji Electrochemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11038683	A2	19990212	JP 1997-192955	19970718
PRAI	JP 1997-192955		19970718		

AB The carrier is manufactured by (1) mixing an epoxy resin, linear aliphatic polyamines, acid anhydrides, and a solvent, (2) coating magnetic powders with the mixture while drying with hot air, and (3) heating the powders for curing the residual resin. The carrier is free from blocking upon curing and does not cause formation of oppositely-charged toners.

IC ICM G03G009-113

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST electrophotog carrier epoxy coating crosslinking agent; aliph polyamine crosslinker epoxy coating carrier; acid anhydride crosslinker epoxy coating carrier; diethylenetriamine crosslinker epoxy resin coating carrier; phthalic anhydride crosslinker epoxy coating carrier

IT Carbon black, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(Ketjenblack EPC 600JD; manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Crosslinking agents

(manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Anhydrides

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Epoxy resins, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**polyamine**- and anhydride-crosslinked; manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Amines, reactions

Amines, reactions

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(**polyamines**, aliphatic, nonpolymeric; manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT Plastics, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
(thermosetting; manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT 220615-99-6P, Diethylenetriamine-Bisphenol A-epichlorohydrin-phthalic anhydride copolymer 220616-01-3P, Bisphenol A-epichlorohydrin-tetrahydrophthalic **anhydride**-triethylenetetramine copolymer 220616-03-5P, Bisphenol A-epichlorohydrin-triethylenetetramine-trimellitic anhydride copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of **epoxy** resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid **anhydrides** as crosslinking agents)

IT 9011-17-0, KYNAR 2801

RL: TEM (Technical or engineered material use); USES (Uses)  
(manufacture of epoxy resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid anhydrides as crosslinking agents)

IT 220616-01-3P, Bisphenol A-epichlorohydrin-tetrahydrophthalic **anhydride**-triethylenetetramine copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of **epoxy** resin-coated electrophotog. carrier using linear aliphatic **polyamines** and acid **anhydrides** as crosslinking agents)

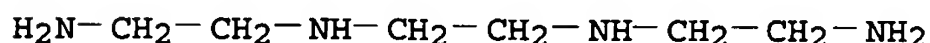
RN 220616-01-3 HCAPLUS

CN 1,3-Isobenzofurandione, 3a,4,7,7a-tetrahydro-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 112-24-3

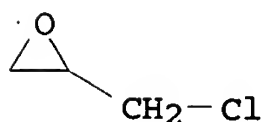
CMF C6 H18 N4



CM 2

CRN 106-89-8

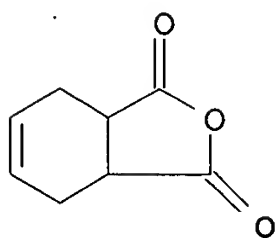
CMF C3 H5 Cl O



CM 3

CRN 85-43-8

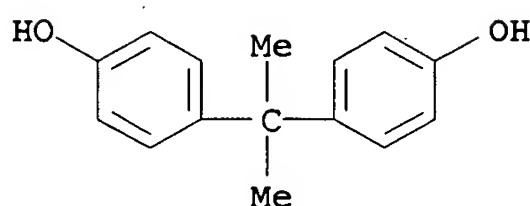
CMF C8 H8 O3



CM 4

CRN 80-05-7

CMF C15 H16 O2



L34 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:42441 HCAPLUS

DN 128:116346

TI Aminourethane curing agents, their preparation, epoxy coating materials containing them, and use of such coatings

IN Collong, Wilfried; Lenhard, Werner; Besold, Robert; Neumann, Uwe

PA Herberts G.m.b.H., Germany; Collong, Wilfried; Lenhard, Werner; Besold, Robert; Neumann, Uwe

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9749749	A1	19971231	WO 1997-EP3268	19970621
	W: AU, CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2230221	AA	19971231	CA 1997-2230221	19970621
	AU 9733428	A1	19980114	AU 1997-33428	19970621
	EP 846137	A1	19980610	EP 1997-929254	19970621
	EP 846137	B1	20020515		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE				
	JP 11513063	T2	19991109	JP 1998-502329	19970621
	AT 217640	E	20020615	AT 1997-929254	19970621
	PT 846137	T	20021031	PT 1997-929254	19970621
	ES 2176751	T3	20021201	ES 1997-929254	19970621
	US 6008314	A	19991228	US 1998-29368	19980514
PRAI	DE 1996-19625345	A	19960625		
	WO 1997-EP3268	W	19970621		

AB Aminourethanes suitable for curing aqueous epoxy-based coating materials are produced by reaction of (A) aminourethanes prepared from (a) compds. with  $\geq 1$  cyclic carbonate group and (b) amines with  $\geq 1$  primary amino group, the ratio of carbonate groups to amino groups being 1:10 to 1:1.1, with (B) water-thinnable epoxy compds. prepared by treating (c) polyalkylene polyethers with a primary and/or secondary  $\alpha$ -amino

group and an  $\omega$ -alkyl ether or  $\omega$ -aryl ether group and/or polyalkylene polyethers with two primary and/or secondary amino end groups, in each case having a weight-average mol. weight of 200-20,000, with

(d)

epoxy compds. having  $\geq 2$  epoxy groups/mol. and an epoxy equivalent weight of 100-2000, the ratio of reactive amino groups in component c to epoxy groups in component d being 1:2 to 1:20 and the epoxy equivalent weight of the condensation product obtained from c and d lying between 150 and 8,000, and optionally (C) other primary amines. Thus, 1436 g of an aminourethane from m-xylylenediamine, 2,2,4-/2,4,4-trimethyl-1,6-hexanediamine, and diglycerol dicarbonate in 2:1:2 equiv ratio and 3550 g of an emulsifier from 603 g Beckopox EP 140 and 440 g Jeffamine M 2070 were mixed with 1020 g m-xylylenediamine and 1190 g isophoronediamine and diluted with water to 80% concentration to give a curing agent, which was used to cure a pigmented coating based on Beckopox EP 384.

IC ICM C08G059-40

ICS C09D163-00

CC 42-9 (Coatings, Inks, and Related Products)

ST aminourethane hardener epoxy coating; water thinned epoxy coating

IT Crosslinking agents

(aminourethane curing agents for water-thinned epoxy coatings)

IT Polyurethanes, uses

Polyurethanes, uses

Polyurethanes, uses

Polyurethanes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy-polyamine-polyoxyalkylene-; aminourethane curing agents for water-thinned epoxy coatings)

IT Polyoxyalkylenes, uses

Polyoxyalkylenes, uses

Polyoxyalkylenes, uses

Polyoxyalkylenes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy-polyamine-polyurethane-; aminourethane curing agents for water-thinned epoxy coatings)

IT Polyamines

Polyamines

Polyamines

Polyamines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy-polyoxyalkylene-polyurethane-; aminourethane curing agents for water-thinned epoxy coatings)

IT Epoxy resins, uses

Epoxy resins, uses

Epoxy resins, uses

Epoxy resins, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-polyoxyalkylene-polyurethane-; aminourethane curing agents for water-thinned epoxy coatings)

IT Coating materials

(water-thinned epoxy coatings cured with aminourethanes)

IT 201304-81-6P 201304-82-7P 201304-84-9P 201489-78-3P

201489-79-4P 201489-80-7P

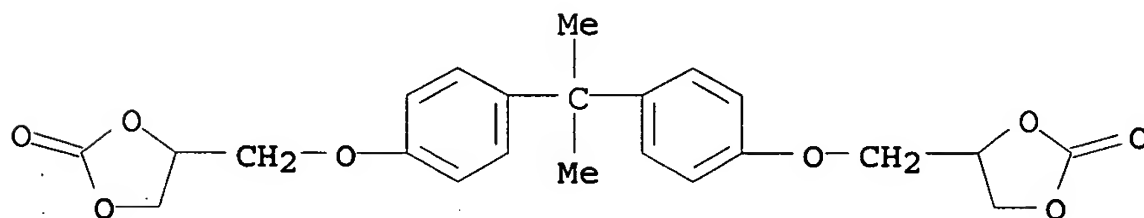
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aminourethane curing agents for water-thinned epoxy

coatings)  
 IT 201304-85-0P 201304-86-1P 201304-87-2P 201489-81-8P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (water-thinned epoxy coatings cured with aminourethanes)  
 IT 201304-82-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (aminourethane curing agents for water-thinned epoxy coatings)  
 RN 201304-82-7 HCAPLUS  
 CN 1,3-Dioxolan-2-one, 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, Beckopox EP 116, 1,3-benzenedimethanamine, methyloxirane polymer with oxirane 2-aminopropyl methyl ether and 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 85023-51-4  
 CMF C23 H24 O8



CM 2

CRN 83137-95-5  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

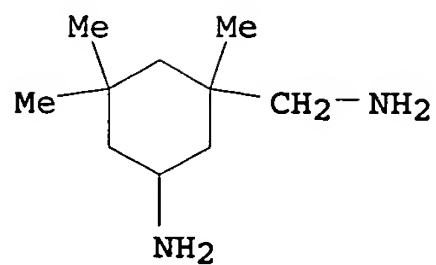
CRN 25513-64-8  
 CMF C9 H22 N2  
 CCI IDS

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>6</sub>-NH<sub>2</sub>

3 ( D1-Me )

CM 4

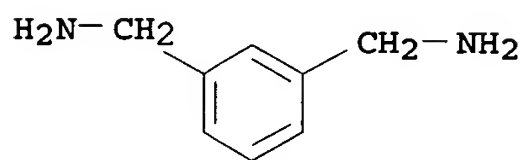
CRN 2855-13-2  
 CMF C10 H22 N2



CM 5

CRN 1477-55-0

CMF C8 H12 N2



CM 6

CRN 111-40-0

CMF C4 H13 N3



CM 7

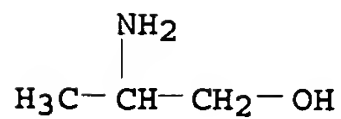
CRN 83713-01-3

CMF C3 H9 N O . (C3 H6 O . C2 H4 O)x . C H4 O

CM 8

CRN 6168-72-5

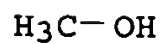
CMF C3 H9 N O



CM 9

CRN 67-56-1

CMF C H4 O

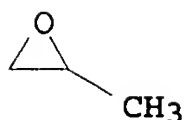


CM 10

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 11

CRN 75-56-9  
CMF C3 H6 O



CM 12

CRN 75-21-8  
CMF C2 H4 O



IT 201304-86-1P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(water-thinned epoxy coatings cured with aminourethanes)

RN 201304-86-1 HCAPLUS

CN 1,3-Dioxolan-2-one, 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 5-amino-1,3,3-trimethylcyclohexanemethanamine, Beckopox EP 116, Beckopox EP 384, 1,3-benzenedimethanamine, methyloxirane polymer with oxirane 2-aminopropyl methyl ether and 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine (9CI) (CA INDEX NAME)

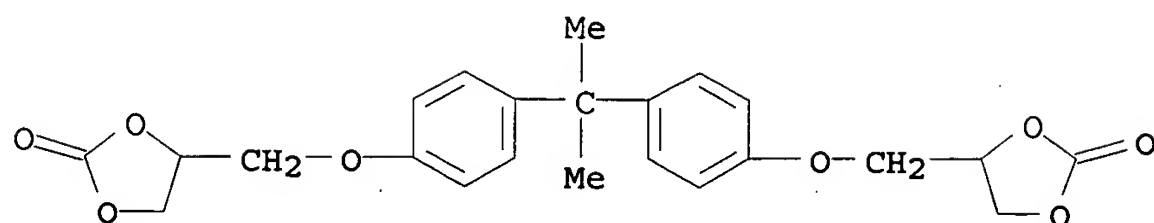
CM 1

CRN 131158-94-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 85023-51-4  
CMF C23 H24 O8



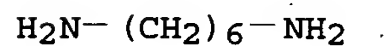
CM 3

CRN 83137-95-5  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

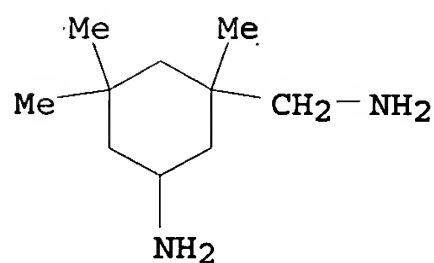
CRN 25513-64-8  
CMF C9 H22 N2  
CCI IDS



3 ( D1-Me )

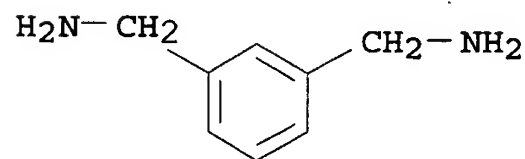
CM 5

CRN 2855-13-2  
CMF C10 H22 N2



CM 6

CRN 1477-55-0  
CMF C8 H12 N2





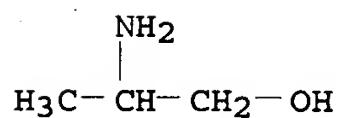
CM 7

CRN 111-40-0  
CMF C4 H13 N3

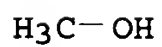
CM 8

CRN 83713-01-3  
CMF C3 H9 N O . (C3 H6 O . C2 H4 O)x . C H4 O

CM 9

CRN 6168-72-5  
CMF C3 H9 N O

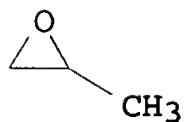
CM 10

CRN 67-56-1  
CMF C H4 O

CM 11

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 12

CRN 75-56-9  
CMF C3 H6 O

CM 13

CRN 75-21-8

CMF C2 H4 O



L34 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1995:996369 HCAPLUS  
 DN 124:88887  
 TI Wet strength resin composition for paper making  
 IN Clungeon, Nancy S.; Devore, David I.; Fischer, Stephen A.; Giordan, Judith C.  
 PA Henkel Corp., USA  
 SO PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9527008	A1	19951012	WO 1995-US3769	19950328
	W: CA, FI, JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2186622	AA	19951012	CA 1995-2186622	19950328
	EP 763073	A1	19970319	EP 1995-914887	19950328
	EP 763073	B1	20000119		
	R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE				
	JP 09511551	T2	19971118	JP 1995-525781	19950328
	AT 188981	E	20000215	AT 1995-914887	19950328
	ES 2142473	T3	20000416	ES 1995-914887	19950328
PRAI	US 1994-221296	A	19940331		
	WO 1995-US3769	W	19950328		

AB Wet-strength resins are prepared by reacting a polyamine, polyaminoamide or alkylated derivative thereof, with a crosslinking agent selected from diepoxides, piperazine dichlorohydrin, methylene bisacrylamide, chloroacetyl chloride and maleic anhydride at  $\geq 0.375$  mol/mol reactive N and polyol solvent. A resin solution (Brookfield viscosity spindle #2; 60 rpm; 25° 45 cP) prepared by reaction of di-Me glutarate, di-Me adipate, diethylenetriamine, and chloroacetyl chloride (preparation given) was added, 0.2%, in paper making handsheets, showing wet strength 12% (increase in wet tensile over dry tensile).

IC ICM C08L063-00

ICS C08L077-06; C08L097-02; C08K003-20

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 43

ST polyamine diepoxide crosslinked wet strength resin; polyaminoamide diepoxide crosslinked wet strength resin; chloroacetyl chloride crosslinked wet strength resin; methylene bisacrylamide crosslinked wet strength resin

IT Crosslinking agents

(diepoxides, piperazine dichlorohydrin, methylene bisacrylamide, chloroacetyl chloride and maleic anhydride for polyamine in making wet strengthening resin)

IT Paper

(thermosetting cationic wet strengthening aids without chlorinated byproduct for)

IT 2917-98-8P 75701-46-1P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate copolymer

RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(wet strength resin composition for paper making)

IT 15336-82-0DP, 5-Ethyl-1,3-diglycidyl-5-methyl hydantoin, crosslinked with polyaminoamide 75701-46-1DP, methylated, crosslinked with diepoxide 172528-66-4P 172528-67-5P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate-methylenebisacrylamide copolymer 172528-68-6P 172528-69-7P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate-maleic anhydride copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(wet strength resin composition for paper making)

IT 75701-46-1P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate copolymer

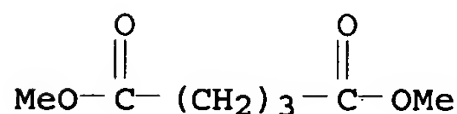
RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(wet strength resin composition for paper making)

RN 75701-46-1 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine and dimethyl pentanedioate (9CI) (CA INDEX NAME)

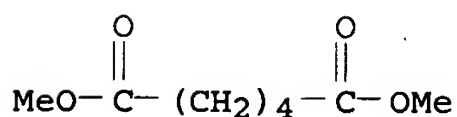
CM 1

CRN 1119-40-0  
CMF C7 H12 O4



CM 2

CRN 627-93-0  
CMF C8 H14 O4



CM 3

CRN 111-40-0  
CMF C4 H13 N3



IT 75701-46-1DP, methylated, crosslinked with diepoxide 172528-66-4P 172528-67-5P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate-methylenebisacrylamide copolymer 172528-68-6P 172528-69-7P, Diethylenetriamine-dimethyl adipate-dimethyl glutarate-maleic anhydride copolymer

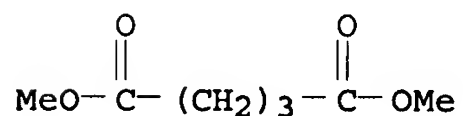
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(wet strength resin composition for paper making)

RN 75701-46-1 HCAPLUS  
 CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine and dimethyl pentanedioate (9CI) (CA INDEX NAME)

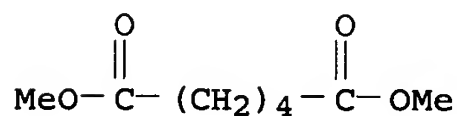
CM 1

CRN 1119-40-0  
 CMF C7 H12 O4



CM 2

CRN 627-93-0  
 CMF C8 H14 O4



CM 3

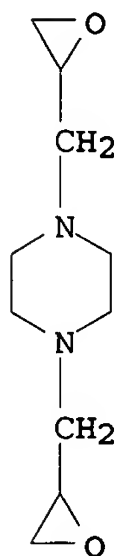
CRN 111-40-0  
 CMF C4 H13 N3



RN 172528-66-4 HCAPLUS  
 CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, 1,4-bis(oxiranylmethyl)piperazine and dimethyl pentanedioate (9CI) (CA INDEX NAME)

CM 1

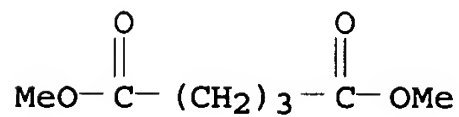
CRN 2917-98-8  
 CMF C10 H18 N2 O2



CM 2

CRN 1119-40-0

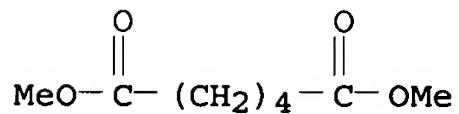
CMF C7 H12 O4



CM 3

CRN 627-93-0

CMF C8 H14 O4



CM 4

CRN 111-40-0

CMF C4 H13 N3



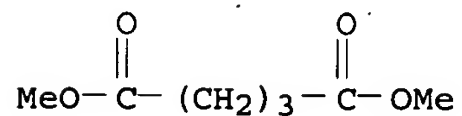
RN 172528-67-5 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, dimethyl pentanedioate and N,N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME)

CM 1

CRN 1119-40-0

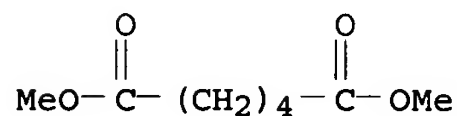
CMF C7 H12 O4



CM 2

CRN 627-93-0

CMF C8 H14 O4



CM 3

CRN 111-40-0

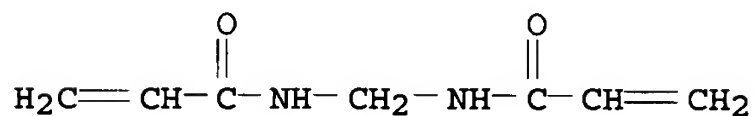
CMF C4 H13 N3



CM 4

CRN 110-26-9

CMF C7 H10 N2 O2



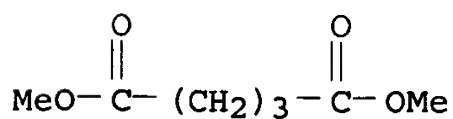
RN 172528-68-6 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, chloroacetyl chloride and dimethyl pentanedioate (9CI) (CA INDEX NAME)

CM 1

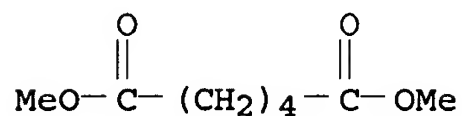
CRN 1119-40-0

CMF C7 H12 O4



CM 2

CRN 627-93-0  
CMF C8 H14 O4



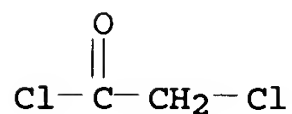
CM 3

CRN 111-40-0  
CMF C4 H13 N3



CM 4

CRN 79-04-9  
CMF C2 H2 Cl2 O

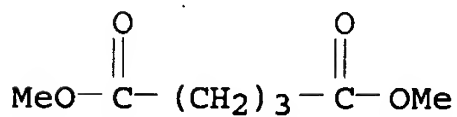


RN 172528-69-7 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, dimethyl pentanedioate and 2,5-furandione (9CI) (CA INDEX NAME)

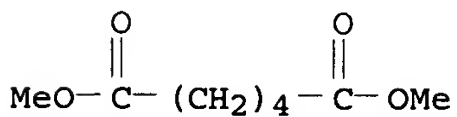
CM 1

CRN 1119-40-0  
CMF C7 H12 O4



CM 2

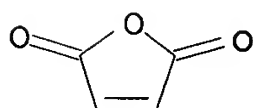
CRN 627-93-0  
CMF C8 H14 O4



CM 3

CRN 111-40-0  
CMF C4 H13 N3

CM 4

CRN 108-31-6  
CMF C4 H2 O3

L34 ANSWER 9 OF 10 HCAPLUS. COPYRIGHT 2006 ACS on STN  
 AN 1995:721747 HCAPLUS  
 DN 123:230267  
 TI Curing agents and method for epoxy resins  
 IN Shimizu, Shigeo; Takano, Hiroyuki; Shimizu, Shinichiro  
 PA Iwata Kagaku Kogyo, Japan; Nippon Pharma Dev Inst.  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07138347	A2	19950530	JP 1993-155993	19930521
PRAI	JP 1993-155993		19930521		

AB The agents comprise reaction products of 1 mol spiculisporic acid (I) or its anhydride with 1.5-3 mol  $\text{NH}_2[(\text{CH}_2)_2\text{NH}]_n\text{H}$  (II:  $n = 2-5$ ). In the method, epoxy resins are cured with the agents. The agents have property between the conventional alicyclic polyamine-type hardeners and dimer acid-type polyamidamine hardeners. Thus, treating 100 g I with 87.6 g II ( $n = 3$ ) gave 164 g an agent, 30 g of which was mixed with 100 g Epikote 828. The mixture was molded and cured at  $35^\circ$  for 10 h and  $140^\circ$  for 4 h to show bending strength 11.81 kg/mm<sup>2</sup>, flexural modulus 310 kg/mm<sup>2</sup>, Izod impact strength 2.47 kg-cm/cm, and heat distortion temperature  $104.9^\circ$ .

IC ICM C08G059-54  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST epoxy resin curing agent method; spiculisporic acid polyamine product hardener  
 IT Crosslinking agents  
     (curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)  
 IT Epoxy resins, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
     (curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)  
 IT 168766-23-2P 168766-24-3P



RL: IMF (Industrial manufacture); PREP (Preparation)  
(crosslinked resins; curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)

IT 469-77-2DP, Spiculisporic acid, reaction products with polyamines  
126531-98-4DP, reaction products with polyamines  
168766-20-9P 168766-21-0P 168766-22-1P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(curing agents; curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)

IT 168766-23-2P 168766-24-3P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(crosslinked resins; curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)

RN 168766-23-2 HCAPLUS

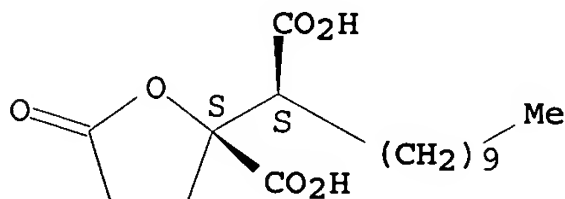
CN 2-Furanacetic acid, 2-carboxy- $\alpha$ -decyltetrahydro-5-oxo-,  
[S-(R\*,R\*)]-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  
(chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA  
INDEX NAME)

CM 1

CRN 469-77-2

CMF C17 H28 O6

Absolute stereochemistry. Rotation (-).



CM 2

CRN 112-24-3

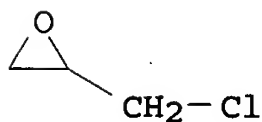
CMF C6 H18 N4



CM 3

CRN 106-89-8

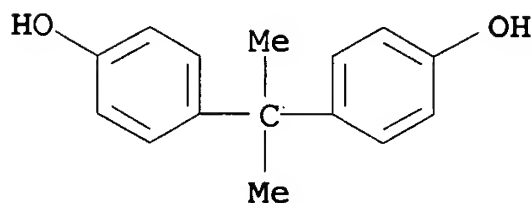
CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



RN 168766-24-3 HCAPLUS

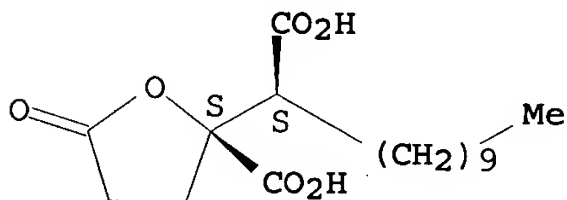
CN 2-Furanacetic acid, 2-carboxy- $\alpha$ -decyltetrahydro-5-oxo-,  
[S-(R\*,R\*)]-, polymer with N-(2-aminoethyl)-N'-[2-[(2-  
aminoethyl)amino]ethyl]-1,2-ethanediamine, (chloromethyl)oxirane and  
4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 469-77-2

CMF C17 H28 O6

Absolute stereochemistry. Rotation (-).



CM 2

CRN 112-57-2

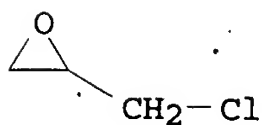
CMF C8 H23 N5



CM 3

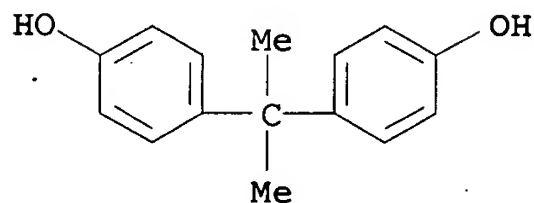
CRN 106-89-8

CMF C3 H5 Cl O



CM 4

CRN 80-05-7  
CMF C15 H16 O2



IT 168766-20-9P 168766-21-0P 168766-22-1P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(curing agents; curing agents obtained from spiculisporic acid or its anhydride and polyamines and curing method for epoxy resins)

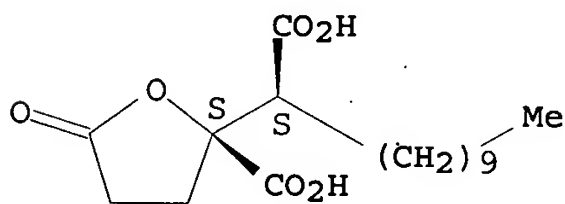
RN 168766-20-9 HCAPLUS

CN 2-Furanacetic acid, 2-carboxy- $\alpha$ -decyltetrahydro-5-oxo-, [S-(R\*,R\*)]-, polymer with N-(2-aminoethyl)-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 469-77-2  
CMF C17 H28 O6

Absolute stereochemistry. Rotation (-).



CM 2

CRN 111-40-0  
CMF C4 H13 N3



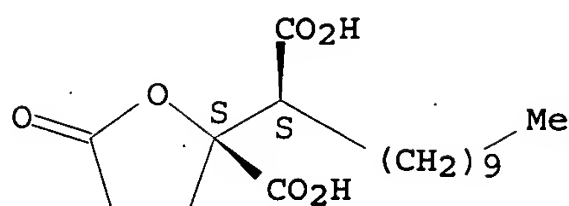
RN 168766-21-0 HCAPLUS

CN 2-Furanacetic acid, 2-carboxy- $\alpha$ -decyltetrahydro-5-oxo-, [S-(R\*,R\*)]-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine (9CI) (CA INDEX NAME)

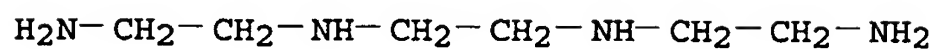
CM 1

CRN 469-77-2  
CMF C17 H28 O6

Absolute stereochemistry. Rotation (-).



CM 2

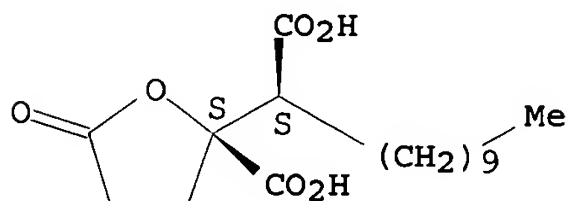
CRN 112-24-3  
CMF C6 H18 N4

RN 168766-22-1 HCAPLUS  
CN 2-Furanacetic acid, 2-carboxy- $\alpha$ -decyltetrahydro-5-oxo-,  
[S-(R\*,R\*)]-, polymer with N-(2-aminoethyl)-N'-[2-[(2-  
aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 469-77-2  
CMF C17 H28 O6

Absolute stereochemistry. Rotation (-).



CM 2

CRN 112-57-2  
CMF C8 H23 N5

L34 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1995:312644 HCAPLUS  
DN 122:317024  
TI Water-based epoxy resin compositions for coatings  
IN Baba, Satokichi  
PA Sanyo Chemical Ind Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06287276	A2	19941011	JP 1993-103608	19930405
PRAI	JP 1993-103608		19930405		
AB	The compns. giving cured products with good water and chemical resistance, gloss, hardness, and adhesion, comprise multifunctional epoxy resins and hardeners comprising (A) reaction products of polyamines and polyoxyalkylenes containing $\geq 1$ CO <sub>2</sub> H and/or (B) compds. obtained by treating the reaction products with (poly)epoxides at equiv ratio of the amino H per the epoxide 1/(1.5-10). Thus, treating 400 g polyethylene glycol and 46.6 g ClCH <sub>2</sub> CO <sub>2</sub> Na at 70° for 4 h in presence of NaOH, and adding HCl, H <sub>2</sub> O, and PhMe gave 402 g CO <sub>2</sub> H-containing polyethylene glycol, 380 g of which was treated with 136 g m-xylylenediamine and 1100 g React CA 101 (epoxy hardener, active H equiv 74) at 180° for 3 h while removing 7 g H <sub>2</sub> O and blended with 405 g H <sub>2</sub> O to give 2024 g hardener. A composition containing Epikote 828 100, the hardener 60, and H <sub>2</sub> O 90 parts was applied on a slate plate and cured at 20° and relative humidity 60% for 4 days to form a coating showing pencil hardness 2 H and good chemical and water resistance.				
IC	ICM C08G059-50				
CC	42-9 (Coatings, Inks, and Related Products)				
ST	polyoxyalkylene polyamide polyamine epoxy hardener; water resistance epoxy resin coating; chem resistance epoxy resin coating				
IT	Crosslinking agents (polyamide-polyamine-polyoxyalkylenes, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Epoxy resins, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Coating materials (chemical- and water-resistant, water-thinned, water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Polyethers, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (epoxy-polyamide-, polyamine-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Polyamides, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (epoxy-polyether-, polyamine-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Polyoxyalkylenes, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (polyamide-polyamine-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-polyamine-polyoxyalkylene hardeners for chemical and water-resistant coatings)				
IT	Epoxy resins, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)				

(polyamide-polyether-, **polyamine**-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT **Polyamines**

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(polyamide-polyoxyalkylene-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT Polyamides, uses

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(**polyamine**-polyoxyalkylene-, crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT 162958-73-8P 162958-74-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(coatings; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT 162958-70-5P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(crosslinking agents, for epoxy resins; water-based epoxy resin compns. for coatings)

IT 107-13-1DP, 2-Propenenitrile, reaction products with epoxy resin-polyamide-**polyamine**-polyoxyalkylenes 162958-71-6DP, reaction products with acrylonitrile 162958-71-6P 162958-72-7P 163634-44-4P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(crosslinking agents, for epoxy resins; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT 3926-62-3, Sodium chloroacetate

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with polyethylene glycol; water-based epoxy resin compns. for coatings)

IT 25322-68-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with sodium chloroacetate; water-based epoxy resin compns. for coatings)

IT 9016-45-9, Polyethylene glycol nonylphenyl ether

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with sodium chloroacetate; water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT 39927-08-7P, Polyethylene glycol bis(carboxymethyl) ether

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(water-based epoxy resin compns. for coatings)

IT 53610-02-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(water-thinned epoxy resin compns. containing polyamide-**polyamine**-polyoxyalkylene hardeners for chemical and water-resistant coatings)

IT 162958-72-7P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);

PREP (Preparation); USES (Uses)

(crosslinking agents, for epoxy resins; water-thinned

epoxy resin compns. containing polyamide-polyamine

-polyoxyalkylene hardeners for chemical and water-resistant coatings)

RN 162958-72-7 HCAPLUS

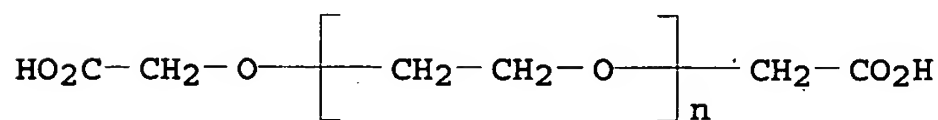
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine,  $\alpha$ -(carboxymethyl)- $\omega$ -(carboxymethoxy)poly(oxy-1,2-ethanediyl) and (chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 39927-08-7

CMF (C2 H4 O)<sub>n</sub> C4 H6 O5

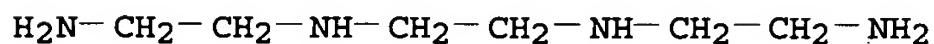
CCI PMS



CM 2

CRN 112-24-3

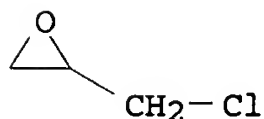
CMF C6 H18 N4



CM 3

CRN 106-89-8

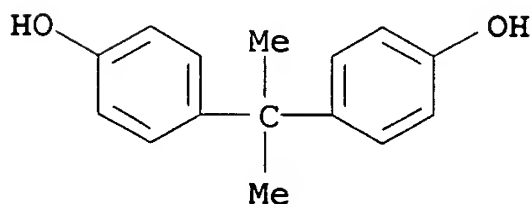
CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



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